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The purpose of this study was to determine if there is a significant difference in the achievement of students in shorthand and typewriting classes taught by a master teacher using automated instruction as compared with the achievement of students using the same method and material with an instructional assistant supervising the classroom. This study was concerned with 33 girls enrolled in two sections of shorthand and 49 girls enrolled in two sections of typewriting at the post secondary level for the entire 2 school years of their program. The findings indicate that there is no significant difference between the performance of shorthand or typewriting students taught with automated instruction and professional personnel and those taught in the same manner utilizing instructional assistants. Therefore it was recommended that professional teachers' time should be spent in more creative work such as preparing the material for the classroom, planning methods, and procedures to be followed, and coordinating the work of the assistants, rather than supervising skill techniques and proofreading papers which may be done as effectively by instructional assistants. With the automated method and semi-professional assistance, it should be possible to offer specialty courses even though the classes are small. (MM)

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A COMPARISON OF A MASTER TEACHER AND INSTRUCTIONAL ASSISTANTS IN AUTOMATED SHORTHAND AND TYPEWRITING INSTRUCTION.

Final Report
of
VE-1 Project No. 18035

A Pilot Study Conducted at The
Harrisburg Area Community College

by
Dorothy Ferencz

July 31, 1968

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CHAPTER I

INTRODUCTION

The philosophy of the Harrisburg Area Community College is as follows:

> All individuals should have ample opportunity to develop themselves through education to the limits of their capacities. Committed to this concept, Harrisburg Area Community College seeks to provide the type of post-high school education which is essential for the maximum realization of each student's aspirations and abilities.
>
> The College recognizes two primary functions of education: transmission of knowledge and culture, and the development of problem-solving abilities. Thus education is both a process of enlightenment and an avenue to self-understanding and self-realization. Recognizing many complex differences among individuals, Harrisburg Area Community College has dedicated its human and physical resources to individualized education in a democratic context.[1]

The secretarial program is offered as one means of serving the differing needs of students, and the staff of the secretarial program is concerned with the need to educate more individuals in a greater heterogeneous student population and to provide this education without increasing the cost.

Historically, the cost of providing career programs in the skills areas has been higher per student than in the general education and transfer programs. The additional cost has been due to several factors: the need for specialized equipment, limitation of student enrollment per section due to the amount of equipment, and the number of laboratory hours in the skills areas.

A current problem faced by institutions of higher learning is teacher recruitment. It is becoming more and more difficult to obtain competent teachers in the secretarial skills area.

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[1] Harrisburg Area Community College Catalogue, p. 12.

As an outgrowth of these problems, a pilot study was undertaken to determine whether it would be desirable to have a master teacher conduct more than one class in shorthand and typewriting at the same time by using instructional assistants, magnetic tape instruction and dictation, transparencies, and tachistoscope slides. If such a project were successful, classes could be scheduled effectively so as to make maximum use of professional staff.

CHAPTER II

HISTORICAL BACKGROUND AND RELATED STUDIES

Shorthand

As language laboratories began to spring up in educational institutions across the nation, teachers of business education began to think about the use of the language laboratory for the teaching of shorthand. Considerable writing has appeared with regard to the use of taped dictation for shorthand classes; however, only brief mention appears on the use of this instructional media in the typewriting class. For this study, no attempt was made to follow the use of magnetic tape recordings in the teaching of business subjects from the very beginning, but rather to determine what is being done at the present time.

Krajicek[2] reported on a study that was completed by South High School in Omaha, Nebraska, in 1964 to determine the status of shorthand dictation laboratories. The study involved replies from 45 school systems in major cities throughout the country. Of these 45 school systems, 22 had installed laboratories,which were used to varying degrees. Eighteen of the schools surveyed used both commercial and teacher dictated tapes,while two prepared their own and two used only commercial tapes. The number of listening stations per installation ranged from 8 to 40.

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[2] Sandra Krajicek, "Nationwide Survey of Shorthand Dictation Labs," Business Education World, Vol. 46, No. 6, February 1966, pp. 22-23.

The study indicated that those who had laboratories were enthusiastic and impressed with the results; however, the survey did contain a warning that the teacher must give drills using the chalkboard and that the programs needed to be varied.

It would appear that as of 1964, shorthand laboratories were not considered to be a major tool of instruction or at least that they were not widely utilized, even though current literature indicated that there are many advantages for the student and teacher.

In 1965, Edwards[3] conducted an experiment which attempted to ascertain whether there is a significant difference between the progress of students taught with taped dictation as compared to live teacher dictation.

> During the first half of the year, both groups were taught exactly the same material by the same method and from the same lesson plan. This also held true for the balance of the study with the exception of the dictation methods. The experimental dictation was all placed on pre-recorded tapes at a range of speed levels, and the same dictation material was used for the control group, but it was dictated orally by the writer.[4]

In the conclusions of this study, Edwards states:

> The data presented seems to indicate that the performance in shorthand taught with taped dictation as compared to 'live' teacher dictation is not significantly related to the number of words per minute transcribed with 95 per cent accuracy, but is definitely related significantly to the growth and progress of students.
>
> In further substantiating the progress of students taught with taped dictation as compared to 'live' teacher dictation it was found that 80 per cent of the experimental group was able to achieve sixty words per minute for three minutes with 95 per cent accuracy as compared to 46.6 per cent of the control group. Thus 33.4 per cent more of the experimental

---

[3] Robert Daniel Edwards, A Study of the Progress of Students Taught with Taped Dictation as Compared to Teacher Dictation in Beginning Gregg Shorthand, 1965, Unpublished master's thesis. Bloomsburg State College.

[4] Ibid., p. 20.

> students were able to achieve sixty words per minute with 95 per cent accuracy for three-minutes through the use of taped dictation.
>
> The writer believes that taped dictation used with multiple-channel equipment is a valuable instruction aid that is especially helpful in providing for individual differences in shorthand learning ability.[5]

Brown[6] indicates that the functional approach is used at Maine Township High School West for approximately the first six weeks with the shorthand laboratory being utilized from the beginning of the tenth week. Preview sheets following the format of the text are prepared in advance for each lesson. During the second year, taped instruction is used from the very beginning of the advanced classes.

It would appear that Brown has demonstrated a more efficient way of presenting preview material as compared with the time necessary to place shorthand outlines on the chalkboard before each class.

One major advantage of the shorthand dictation laboratory which appears throughout the literature is presented by Harwood,[7] who notes that the students are not limited in the amount of additional dictation practice that they can receive because of the lack of available teaching personnel. He also notes that the students are of the opinion that the shorthand laboratory assists them in building speed.

Another advantage of the shorthand dictation laboratory, as pointed out in an article relating to the experiences of the Central City Business

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[5] _Ibid_., p. 38.

[6] O. W. Brown, "Roundup of Dictation Labs--Maine Township High School West, Des Plaines, Illinois," _Business Education World_, Vol. 44, No. 5, January 1964, p. 17.

[7] R. Frank Harwood, "Roundup of Dictation Labs--Massey College, Birmingham, Alabama," _Business Education World_, Vol. 44, No. 5, January 1964, pp. 19-20.

Institute[8] is that the teacher is free to move about the room and monitor the students' work. The school further noted that the problem of make-up work could be handled more easily and that such a system provided an excellent opportunity for team teaching with more experienced teachers able to supervise less experienced teachers.

The mention of team teaching and the opportunities of making it possible for experienced teachers to supervise beginning teachers can be related to the problem under investigation. Is student achievement greater when the professional teacher supervises the classroom?

Investigation of current literature brings forth various innovations in the use of the shorthand laboratory. Colley[9], in writing about the multiple-channel taped dictation at Warren G. Harding Senior High School, makes mention of allowing silent periods on the tapes so that the students can preview and postview shorthand outlines used in the dictation.

The extremes in the utilization of shorthand laboratories can perhaps be realized in comparing the use of the laboratory at Bowling Green State University and at Brigham Young University.

Guthrie[10] indicates that the shorthand laboratory at Bowling Green State University is used mainly for out-of-class dictation with supervision being provided for the lab,which is open nine hours a day, five days a week, and one evening a week. The requirements for the use of the lab by the teachers varies.

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[8] __________,"Roundup of Dictation Labs--Central City Business Institute, Syracuse, New York," Business Education World, Vol. 44, No. 5, January 1964, p. 20.

[9] Eileen Colley, "Roundup of Dictation Labs--Warren G. Harding Senior High School, Warren, Ohio," Business Education World, Vol. 44, No. 5, January 1964, p. 22.

[10] Mearl R. Guthrie, "Roundup of Dictation Labs--Bowling Green State University, Bowling Green, Ohio," Business Education World, Vol. 44, No. 5, January 1964, pp. 21-22.

Perhaps Brigham Young University[11] is beginning to make maximum use of its laboratory equipment. The report of an experiment at the University indicated that the student population had increased 80 percent from 1958 to 1964 without an equal increase in faculty. The number of faculty members required to cope with the increase in students was only approximately 16 percent. Taped instruction was started in 1958 and was credited with the relative stability of the teaching staff.

The experiment involved a multiple room escalator program where intermediat and advanced shorthand classes were scheduled for the same class period. Students were grouped according to their initial writing and transcription ability and could advance just as rapidly and as far as possible during a given semester. The main features of the multiple-room escalator program are as follows:

1. Each complete class period is taught by recorded instruction. There is no live instruction.
2. The same textbook is used by intermediate and advanced students.
3. A total of 227 different 50-minute tapes are required to operate the program.
4. Taped lessons are piped from a central control room to individual classrooms or to any combination of five classrooms.
5. Graduate assistants are employed to supervise the mechanical aspects of the program including operation of tape recorders, roll check, recording, and so forth.
6. A variety of activities and classroom procedures used on taped lessons.
7. All shorthand classes are taught in rooms equipped with typewriters.

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[11] Ted D. Stoddard and S. ElVon Warner, "Roundup of Dictation Labs--Brigham Young University, Provo, Utah," Business Education World, Vol. 44, No. 5, January 1964, p. 18.

8. A separate weekly testing lab at a class period other than the regular class period is conducted to determine when students should move from one speed group to another.

9. Transcription competence from three-minute dictation exercises on unfamiliar material is used as a basis for moving students from one speed group to another.

10. About 300 students are involved in the intermediate and advanced shorthand programs each semester.

11. Three regular faculty members are required to administer the multiple room 'escalator' program; from eight to ten would be required under the old one-teacher-for-one-classroom systems.[12]

The literature also indicated that Brigham Young University is planning to record instructions and lessons of beginning shorthand on tapes utilizing more tapes in transcription and expert shorthand courses.

The current literature indicates that many uses are made of the shorthand laboratory and that perhaps what is needed is to combine all of the variables into one plan and attempt to determine whether professional staff is necessary during the entire class period. Certainly, previous studies indicate that there is not too much doubt as to the validity of taped dictation, but rather research needs to be done to show just how such a laboratory might be fully utilized. Therefore, one purpose of this study is to attempt to determine whether it is desirable to have a master teacher guide the learning process in more than one class in shorthand, simultaneously using instructional assistants, magnetic tape instruction and dictation, transparencies, and Tachistoscope slides.

Typewriting

The report of the Brigham Young University shorthand laboratory indicated that some work was being done with taped instruction in the teaching of typewriting.[13] However, in 1965, very little could be found in the way of research in this area.

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[12] *Ibid.*

Schellstede[14] conducted an experiment at the Nathan Hill High School in Tulsa, Oklahoma which involved the teaching of typewriting to 72 students housed in one classroom. The experiment used a multiple-channel listening station. The teacher was assisted by advanced typewriting students who recorded grades, checked roll, and so forth. Classes in two other schools comparable to the high school with the experimental group were used as the control group. In the control group, traditional materials and procedures were used. The following are the advantages of the multiple earphone approach as presented in the study:

1. A student is able to type with greater speed and accuracy.
2. The student who has been absent may receive individualized instruction and assistance.
3. The student learns to listen closely to instructions because he will hear them only once through the earphone.
4. Instruction is planned and produced in advance by several teachers; therefore, material is presented to each student in a similar manner.
5. The teacher is free to assist the individual student without detaining the rest of the class.
6. The teacher is able to analyze the problems of the individual student through close observation and to determine which students need to repeat lessons.
7. The better typewriting students may take more than one lesson a day.
8. The student concentrates on his typewriting assignment and is not distracted by activity in the room.
9. There were no discipline problems.

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[13] Ibid.

[14] Agnes Schellstede, "Teaching Typing with Tapes," Business Education World Vol. 44, No. 8, April 1964, pp. 13-15.

> 10. There is considerable saving in the cost of typewriting instruction, in that a large section of students may be taught by one teacher.[15]

Again mention is made of the use of aides; however, their tasks were limited to the recordkeeping and operation of the equipment rather than assisting with the students and typewriting techniques. The real question is whether the professional teacher can possibly assist 72 students as effectively as would be possible with a smaller group.

Prieb reported on a study to compare the teaching of double-sized classes in which special tape recordings and individual head sets were used with the normal manner of teaching in traditional classrooms. The recommendations of this study are as follows:

> 1. Continue the multi-tape earphone method of teaching large classes of typing.
>
> 2. Try same set-up for other business classes.
>
> 3. Vary approach, then analyze the final statistics in same way as was done in the present experiment.
>
> 4. In analyzing final statistics, take the number of absences into consideration.
>
> 5. Consider the use of more teacher's aides, not student help, in improving teaching.
>
> 6. Consider and outline the duties of the certified teacher and the teacher's aide when working in unusual situations.
>
> 7. Investigate the possibility of programming a complete skill course with tapes and head sets, and using a teacher on film in cases where visual stimulus seems called for.[16]

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[15] _Ibid_.

[16] Gordon F. Prieb, "Teaching Double-Sized Classes With Tapes," _Business Education World_, Vol. 46, No. 6, February 1966, pp. 24-27.

The recommendations on teacher aides move away considerably from the traditional thinking that only a certified teacher is capable of assisting students in techniques in typewriting. If instructional assistants are found to be valuable in this field, then perhaps the answer to increased costs is not to provide cathedral size classes, but rather to operate more than one class in separate rooms with the master teacher moving back and forth between the classes to assist where professional help is necessary. Therefore, one of the purposes of this study is to attempt to determine whether it is desirable to have a master teacher guide the learning process in more than one class in typewriting at the same time by using instructional assistants, magnetic tape instruction, transparencies, and tachistoscope slides.

CHAPTER III

THE PROBLEM

Part I

Problem I

This study was undertaken in an attempt to answer the question, is there a significant difference in the achievement of students in shorthand classes taught by a master teacher using taped instruction and dictation, tachistoscope and slides, and transparencies as compared with the achievement of students using the same method and materials with an instructional assistant supervising the classroom.

Hypotheses Related to Problem I

The purpose of this study was to compare the performance in four semesters of shorthand of two classroom groups of community college students who studied shorthand under two methods of direct supervision and assistance and to test the following hypotheses:

1. There is a significant difference between professional assistance and semiprofessional assistance in the learning of shorthand theory at the end of one semester of instruction in Gregg Diamond Jubilee Series shorthand.

2. There is a significant difference between professional assistance and semiprofessional assistance in the dictation speed for five minutes from new material transcribed with 95 percent accuracy at the end of the first semester of instruction in Gregg Diamond Jubilee Series shorthand.

3. There is a significant difference between professional assistance and semiprofessional assistance in the dictation speed for five minutes from new material transcribed with 95 percent accuracy at the end of the second semester of instruction in Gregg Diamond Jubilee Series shorthand.

4. There is a significant difference between professional assistance and semiprofessional assistance in the net words per minute transcription rate at the end of the second semester of instruction in Gregg Diamond Jubilee Series shorthand.

5. There is a significant difference between professional assistance and semiprofessional assistance in the dictation speed for five minutes from new material transcribed with 95 percent accuracy at the end of the third semester of instruction in Gregg Diamond Jubilee Series shorthand.

6. There is a significant difference between professional and semiprofessional assistance in the dictation speed for one and one half to two minutes on new material transcribed as mailable copy at the end of the third semester of instruction in Gregg Diamond Jubilee Series shorthand.

7. There is a significant difference between professional assistance and semiprofessional assistance in the achievement on quizzes in punctuation and spelling at the end of the third semester of instruction in Gregg Diamond Jubilee Series shorthand.

8. There is a significant difference between professional assistance and semiprofessional assistance in the net words per minute transcription rate at the end of the third semester of instruction in Gregg Diamond Jubilee Series shorthand.

9. There is a significant difference between professional assistance and semiprofessional assistance in the points earned on dictation transcribed for mailability at the end of the fourth semester of instruction in Gregg Diamond Jubilee Series shorthand.

Part II

Problem II

This study was also undertaken to determine if there is a significant difference in the achievement of students in typewriting classes using taped instruction and transparencies as compared with a class using the same procedure and materials where an instructional assistant supervises and assists the students in lieu of a professional teacher.

Hypotheses Related to Problem II

The purpose of this study was to compare the performance in four semesters of typewriting of two classroom groups of community college students who studied typewriting under two methods of direct supervision and assistance and to test the following hypotheses:

1. There is a significant difference between professional assistance and semiprofessional assistance in the net words per minute straight copy typing rate at the end of one semester of instruction in typewriting.

2. There is a significant difference between professional assistance and semiprofessional assistance in the production rate at the end of the first semester of instruction in typewriting.

3. There is a significant difference between professional and semiprofessional assistance in the learning of placement, spacing, and planning theory at the end of the first semester of instruction in typewriting.

4. There is a significant difference between professional and semiprofessional assistance in the net words per minute straight copy typing rate at the end of the second semester of instruction in typewriting.

5. There is a significant difference between professional assistance and semiprofessional assistance in the production rate at the end of the second semester of instruction in typewriting.

6. There is a significant difference between professional assistance and semiprofessional assistance in the net words per minute straight copy typing rate at the end of the third semester of instruction in typewriting.

7. There is a significant difference between professional assistance and semiprofessional assistance in the production rate at the end of the third semester of instruction in typewriting.

8. There is a significant difference between professional assistance and semiprofessional assistance in the net words per minute straight copy typing rate at the end of the fourth semester of instruction in typewriting.

9. There is a significant difference between professional assistance and semiprofessional assistance in the number of points earned on typewriting projects for mailable copy at the end of the fourth semester of instruction in typewriting.

Part III

Problem III

The third area of concern in this study is to attempt to determine if there is a significant difference in the student evaluation of the master teacher at the end of two years of the study as compared with an evaluation of the same teacher utilizing the traditional methods of instruction.

Elements of Problem III

One purpose of the study is to survey student attitudes toward automated instruction and answer the following questions:

1. Do the students express a favorable attitude toward automated instruction?

2. Do the students prefer automated instruction to the traditional method of instruction?

Delimitations

This study was concerned with 33 girls enrolled in two sections of shorthand and 49 girls enrolled in two sections of typewriting at the Harrisburg Area Community College for the entire two school years of their program, 1966-1967 and 1967-1968.

The shorthand students were matriculated in the two-year career curriculum in secretarial science and the typewriting students were matriculated in both the secretarial curriculum and the two-year general clerical career curriculum.

Definition of Terms Used in The Study

Gregg Diamond Jubilee Series - represents the latest revision of Gregg's shorthand system.

Preview - to study outlines selected from the dictation material prior to writing the material from dictation.

Read Back - to read from shorthand notes the material that was written from dictation.

Taped dictation - material to be written in shorthand which has been pre-recorded on tape.

Taped instruction - traditional lecture and instructions which have been pre-recorded on tape.

Transcript - typewritten copy of shorthand notes written from dictation.

NWPM - abbreviation for net words per minute.

Timing - the total amount of time allotted to complete a project.

Tachistoscope slides - shorthand outlines placed on frosted glass and sprayed with a fixative to make them transparent.

Tachistoscope - a small overhead projector with a flash meter. Outlines may be projected on a screen for 1/10 of a second to 1/1,000 of a second.

Transparencies - a picture, design, or illustration on clear plastic, made visible by light shining through from behind and projected on a screen.

Instructional Assistant - a person who has completed two years of post high school education, but less than a baccalaureate degree in secretarial science, who has had office work experience, and demonstrates a proficiency in the skills area in which he/she is to assist. This person works a minimum of eight hours per day; the work assignment to meet the needs of scheduled classes and preparation of class materials as directed by the professional staff.

Semiprofessional assistance - assistance given to students in typewriting or shorthand techniques by the instructional assistant.

Master teacher - for purposes of this study, the director of the program who has taught shorthand and typewriting for the past fourteen years - two years in public high schools in Pennsylvania, seven years in a four-year college, and five years in community colleges.

ACT - abbreviation for American College Testing Program.

Mailability - Correspondence, tabulation, or other typewritten copy with neat error correction, all words spelled correctly, all typewriting errors corrected, and properly arranged on the page. The original may be from shorthand notes, printed material, handwritten copy, and sound recorders.

Limitations

The grouping of the two sections of shorthand had to be made from a total of 33 students. The subjects in the two classes involved in the study were students who had never studied shorthand and those students who failed the exemption test for beginning shorthand. (Those who passed the exemption test were placed in Shorthand II.) The exemption test for shorthand consisted of passing the final examination for Shorthand I - dictation of new material at 60 words per minute to be transcribed with at least 95 percent accuracy.

The grouping of the two sections in typewriting was made from a total of 53 students. The subjects in the two sections involved in the study had no previous typing experience or had failed the exemption test for Typewriting I. (Those who passed the exemption test were placed in Typewriting II.) The final examination for Typewriting I was administered as the exemption test and contained straight copy writings, a letter, and a tabulation.

The number of students in each section of shorthand and typewriting at the end of the two year study was rather small due to normal attrition for personal reasons, change of curriculum, full-time employment, and several failures.

Students were not matched on such factors as interest, drive, manual dexterity, and future occupational plans as the size of the group limited this possibility.

Efforts were made to insure that out-of-class study was the same for all students in both shorthand and typewriting through the use of homework tapes; however, it was impossible to maintain absolute control, so there was no way of insuring that the amount of study in shorthand or practice in typewriting was the same for all students.

CHAPTER IV

PROCEDURE OF THE INVESTIGATION

Part I

Experimental Design for Testing Problem I

The experimental and control groups in shorthand were matched on the basis of the ACT composite score obtained from the Division of Counseling. The composite score consists of the average of four subgroups - English, math, social science, and natural science. Both groups were taught in exactly the same manner with the exception of the actual classroom supervision. The control group was supervised entirely by the master teacher while the experimental group was supervised by the instructional assistant with periodic assistance from the master teacher.

Detailed lesson plans were written by the master teacher and used by both the instructional assistant and the master teacher to insure that the same procedure was followed. Teacher-made tests were administered at the end of each semester to compare the achievement of the two groups. The t-test was employed to test the difference between means of the two groups.

Selection of Subjects

Sixty-five applications were received for admission to the secretarial curriculum at the Harrisburg Area Community College for the fall of 1966. Of the 65 applicants, 55 women were admitted to the program.

Admission to the secretarial curriculum is based upon a minimum raw score of 18 on the ACT English subgroup and a composite raw score of 17; however, the high school transcript is also reviewed and a personal interview may be required in some cases. Of the 55 individuals admitted, 40 actually registered in the fall of 1966.

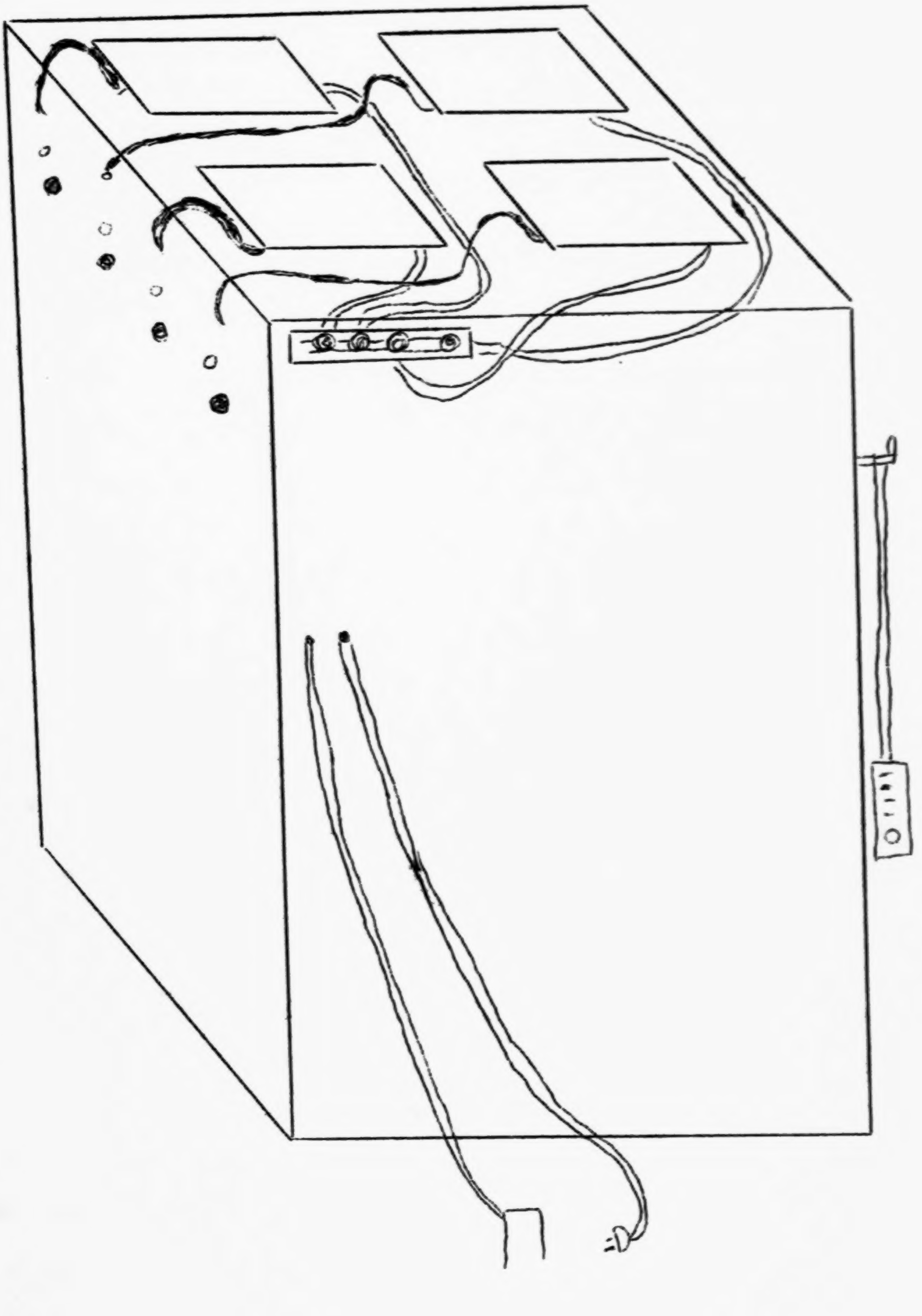
All those students admitted who had completed a shorthand course in high school were required to take the exemption test. Those students capable of recording new material dictated at 60 words per minute and transcribing the dictation with 95 percent accuracy were placed in Shorthand II. Seven students were exempt; therefore, the two sections of shorthand for the experimental and control groups were selected from the remaining 33 students.

The ACT composite scores were obtained from the Division of Counseling and this measure of student ability provided the basis for matching groups. The mean composite score of the control group was 18.3 and the experimental group was 18.5.

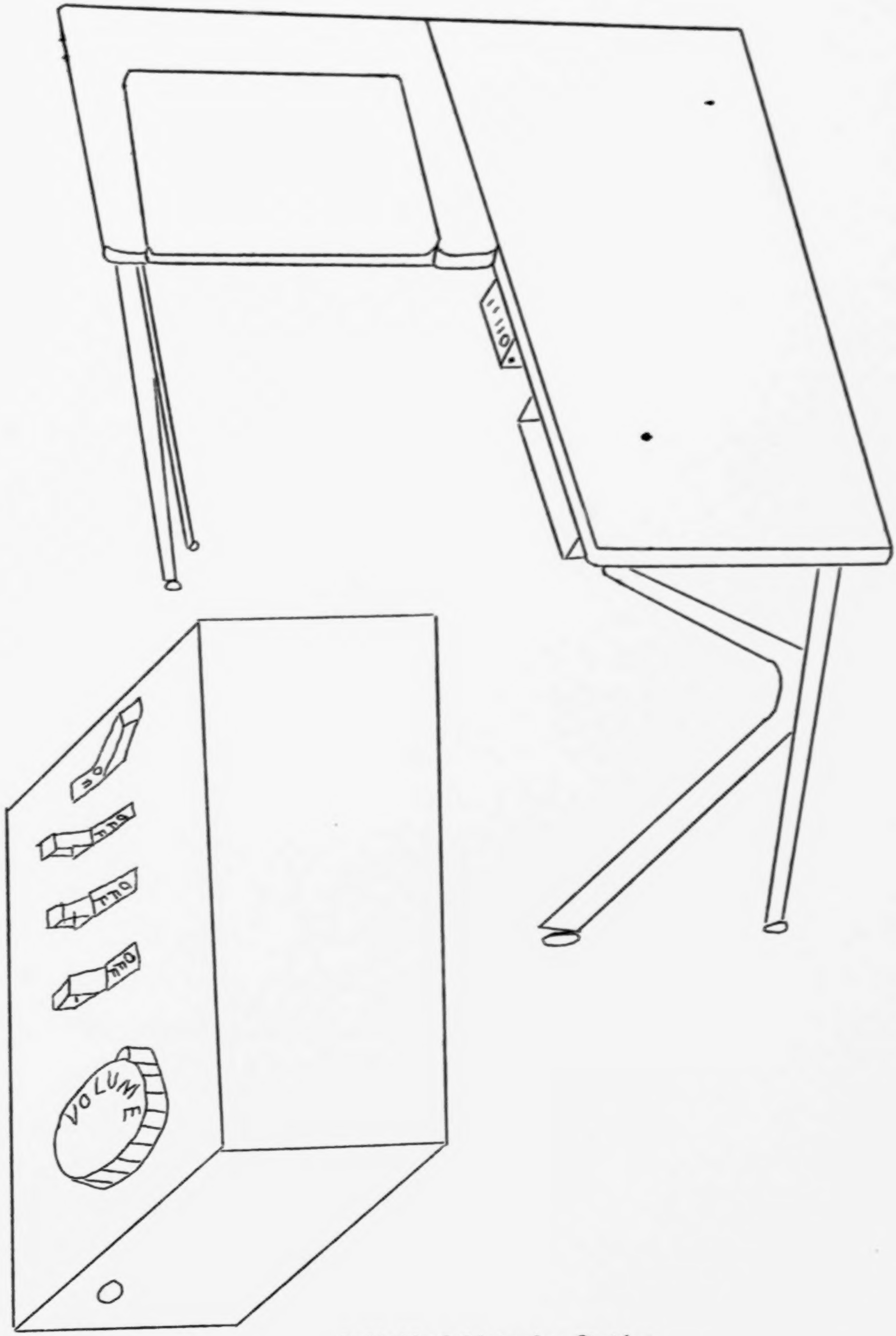
Selection of Equipment

The electronic equipment designed for the experiment was selected because it provided all of the features thought necessary and at the same time was simple to operate. The features desired by the master teacher were individual student listening stations with four-channel selection and volume control, a monitor to be carried by the instructor, a simple console to house the four tape recorders, and a tape which would record only one class period. A diagram of the console is found on page 21 and a drawing of the listening station and its placement on the desk is shown on page 22.

It was desirable to obtain a tape recorder which could be used for both machine transcription and on the console and which would require as close to a 50-minute tape as possible. A longer tape would require the



Console for Four-Channel System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Individual Listening Station

dictation of more than one lesson per reel and thereby increase the amount of time necessary to set up for each class period. A tape providing less than 45 minutes was considered to be burdensome because of the necessity to reload the machine during the class period. A tape recorder which provided an index that could be easily read by the instructors and students as well as a correlated log sheet was also desirable. Of course, clear reproduction was a must; and, hopefully, the necessity for splicing broken tape would be held to a minimum. Tape size was also a consideration because of storage. The single loop secretarial earphones were desired, as they are more appealing to a female population and are more sanitary. The DeJur Grundig Stenorette provided all of these features. Each reel of tape was 45 minutes in length. As each class period was 50 minutes and time was required for previewing shorthand outlines, this was more than adequate.

The system was wired in and built to the specifications of the master teacher. Any student could operate the console in order to complete out-of-class assignments without fear of damage to sensitive equipment. Four extra tape recorders with microphones to be used by the instructional assistants and master teacher in preparing tapes, 24 student listening stations and monitor in the beginning shorthand classroom, 25 listening stations and monitor in the advanced classroom, and 3,000 45-minute reel tapes were purchased.

Previous studies indicated that duplicated preview sheets were employed; however, advertisements showed that reading equipment could be used for this purpose. The Tachistoscope was selected for flashing preview words because of its flexibility in presenting the outlines at random rather than in the same sequence, thereby eliminating to some extent the memorization of what was to follow. The slides for the Tachistoscope could be made by the master teacher. The slides are made by writing the shorthand outlines on 3 1/4" x 4" frosted glass with a lead pencil and spraying them with a fixative for permanence. An illustration of a slide is shown on page 25. Approximately 800 slides were purchased for the study.

Transparencies were also selected for presenting preview words, and 289 transparencies were made.

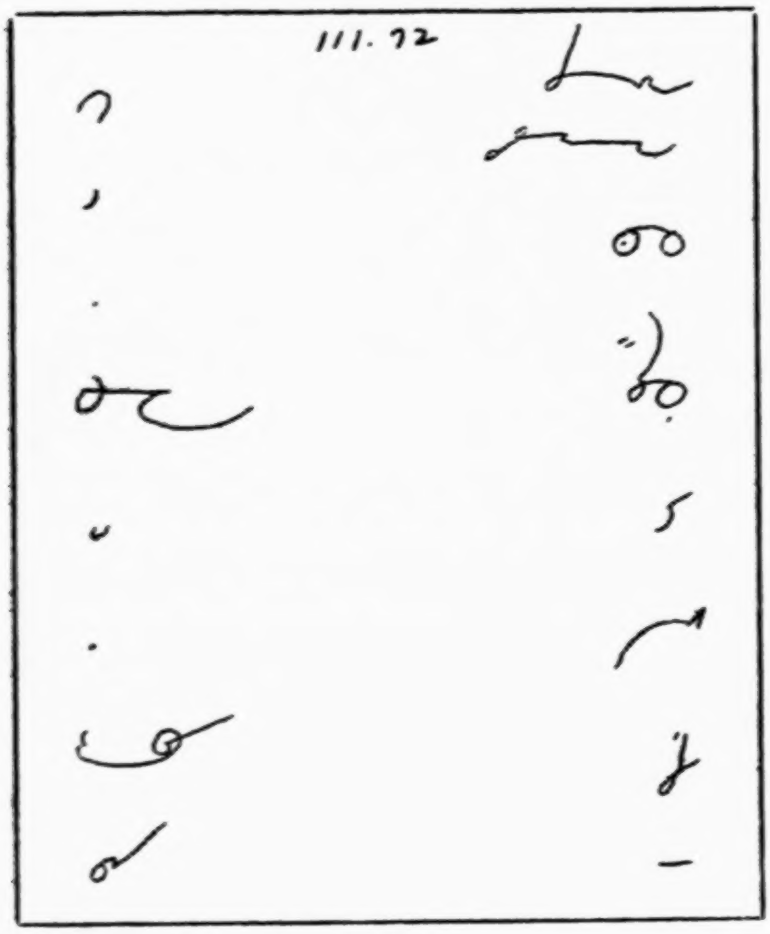
Each of the two classrooms was equipped with a Tachistoscope, overhead projector, and screen.

Selection of Physical Facilities

Physical facilities were required which would provide a relatively secluded spot for the dictating of tapes and yet allow close communication between those working on the study. Therefore, a small duplicating room was renovated to provide two small offices to be utilized by the instructional assistants for dictating tapes, with an adjoining office for the master teacher.

The beginning typewriting classroom had been previously equipped with the listening stations in 1965, and it was determined to move the advanced typewriting classroom closer to the faculty office and the beginning classroom to facilitate easier access to both rooms by the master teacher. A diagram of the classrooms occupied for the first year of the study is shown on page 26.

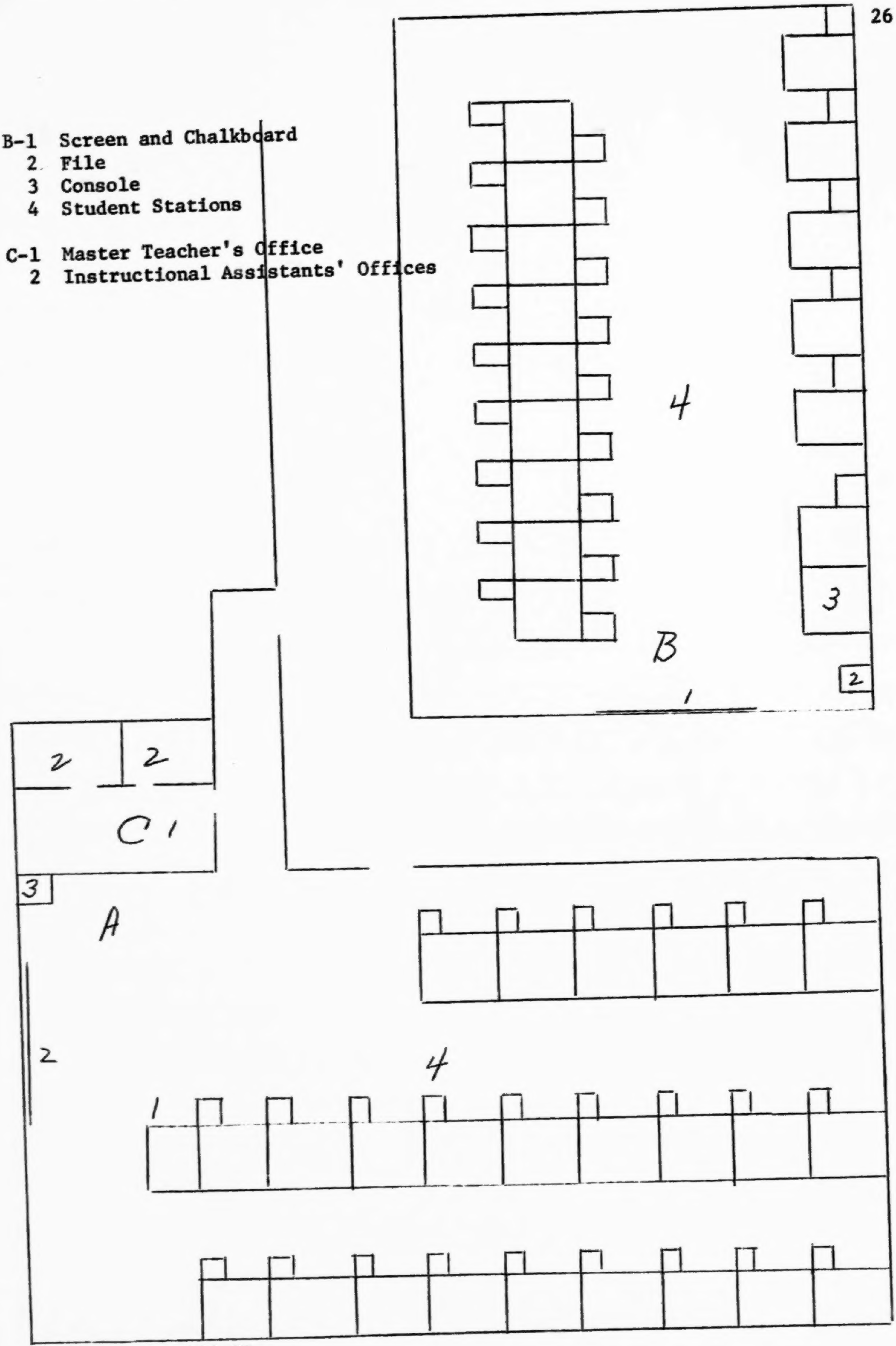
During August of 1967, the Harrisburg Area Community College moved to its new campus at 3300 Cameron Street Road. The classrooms were again



Tachistoscope Slide

B-1 Screen and Chalkboard
  2 File
  3 Console
  4 Student Stations

C-1 Master Teacher's Office
  2 Instructional Assistants' Offices



Classrooms--1966-67
  A-1 Console
    2 Screen and Chalkboard
    3 File
    4 Student Stations

designed to accommodate the equipment to be utilized and convenient access to all study areas by the professional staff. A drawing of the new facilities is shown on page 28.

Selection of Materials

Gregg Shorthand for Colleges, Volume I, Diamond Jubilee Series, was selected as the textbook for the first semester of shorthand. New-material for dictation in the classroom was taken from Graded Drills in Gregg Shorthand Simplified by A. E. Klein.

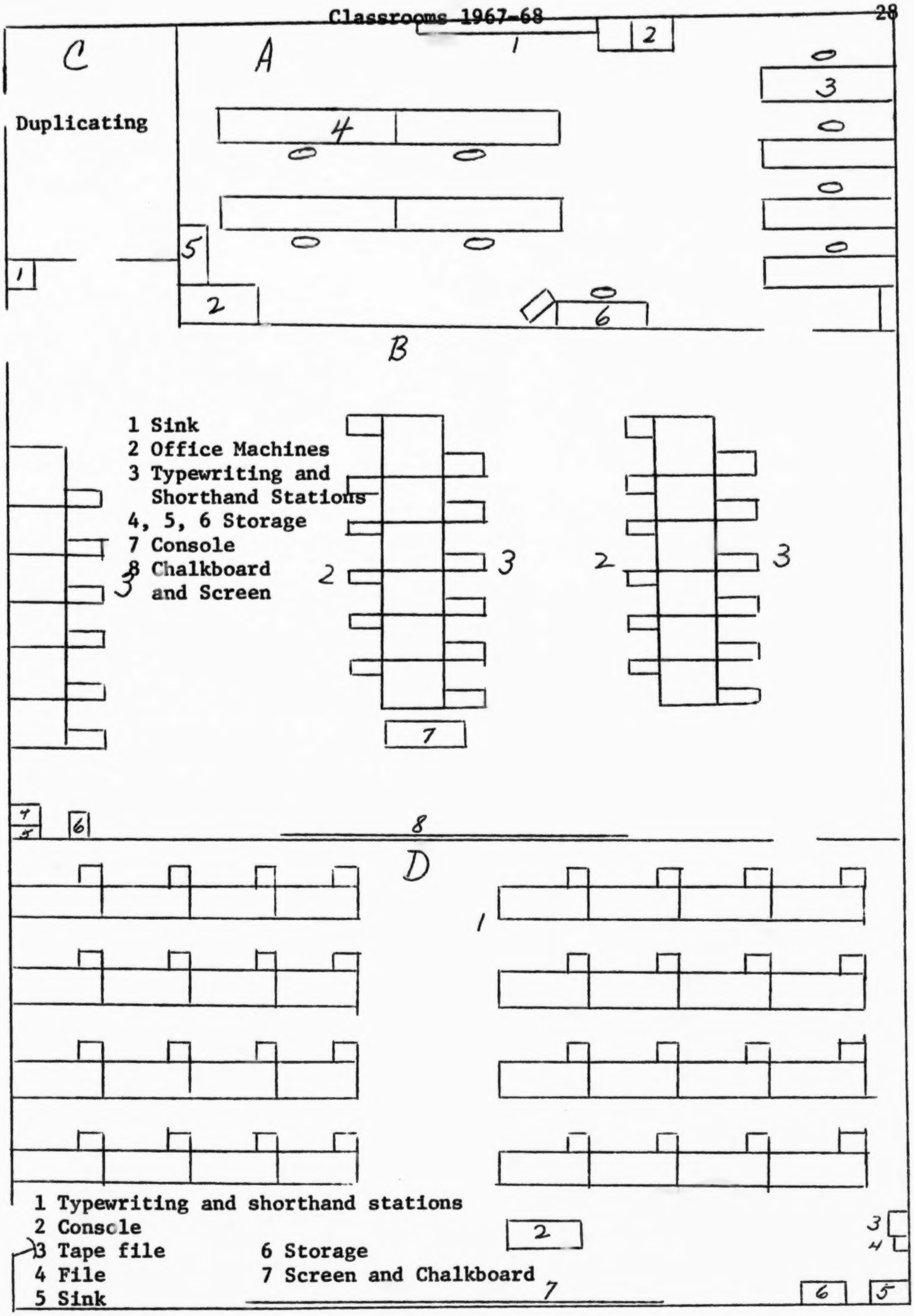
The second semester text was Gregg Shorthand for Colleges, Volume II, Diamond Jubilee Series. The material in this text was assigned for homework and class dictation material was obtained from Today's Secretary, Student Transcript, Gregg Shorthand Simplified, and Progressive Speed Dictation with Previews.

The third semester text was Gregg Speed Building for Colleges, Diamond Jubilee Series. Class dictation was obtained from Today's Secretary, Business Teacher, Transcription Dictation, and the Student Transcript, Gregg Speed Building for Colleges, Simplified.

The fourth semester text was Shorthand Dictation Studies, Third Edition. Dictation for transcription was taken from Dictation for Transcription, Diamond Jubilee Series and the teacher's manual of Dictation Studies, Third Edition.

The material used for testing was taken from Speed Dictation with Previews in Gregg Shorthand, Diamond Jubilee Series, and letters gathered over the years by the master teacher.

Classrooms 1967-68



1 Sink
2 Office Machines
3 Typewriting and Shorthand Stations
4, 5, 6 Storage
7 Console
8 Chalkboard and Screen

1 Typewriting and shorthand stations
2 Console
3 Tape file
4 File
5 Sink
6 Storage
7 Screen and Chalkboard

A--Simulated Office
1 & 2 Bookcases, files, and tape cabinets
3 Investigator and Instructional Assistants' Desks
4 Student Work Stations
5 Central Recording Units
6 Magnetic Tape Selectric Typewriter

Selection of Instructional Assistant

The instructional assistant in shorthand was a graduate of the secretarial program at the Harrisburg Area Community College with office experience prior to entering college. She was hired as an assistant for her cooperative work experience program to prepare tapes for testing before being introduced in the study groups. She was chosen because of her desire to work on the program, her relationship with her peer group as a student, and her accomplishment as a student. This assistant remained throughout the study and is still employed in the same capacity at the College.

Experimental Program

A. Shorthand I

During the Spring of 1966, the lesson plans for Shorthand I were written by the master teacher. The tapes were dictated by the instructional assistant, and the transparencies and tachistoscope slides were prepared by the master teacher. The materials were tested in a beginning class during the semester and revised where necessary during the summer.

Throughout the study, all materials were prepared at least one semester in advance, tested in the classroom, and revised where necessary before becoming a part of the project.

An index strip was prepared for each tape and was attached to the lesson plan. Each day's lesson plan noted all materials necessary for the class: tapes, slides, transparencies. The lesson plan and transparencies were then placed in a folder and indexed according to the course number and the class number. The tapes for each class were coded in the same way: course number, class number, and tape number. For example, a tape catalogued as 112.362 would mean that the course was Secretarial Science 112, Shorthand II, lesson 36, and the second speed.

The tapes and slides were stored in microfilm cabinets in chronological order. At the end of each day the instructional assistant obtained the next day's lesson plan from the file, gathered the tapes and slides, and placed them in a portfolio for the following day.

In the fall, the revised materials were used in the control group by the master teacher. The very first day of the class, Lesson 1 of Gregg Shorthand for Colleges, Diamond Jubilee Series, was presented by the master teacher using the Tachistoscope slides for a major portion of the class period. A brief explanation was given of the shorthand letters and the combining of the letters to form words. The words were then flashed on the screen at the slowest speed and the students would spell and pronounce the word. Transparencies containing the sentences from Lesson 1 were then placed on the overhead projector and the students read in unison for the last 20 minutes of the class period. No out-of-class assignment was given for this class.

The experimental class was conducted in exactly the same way with the master teacher presenting the shorthand theory on the Tachistoscope and the instructional assistant supervising the reading from the transparencies.

The second class period, the same lesson was presented in exactly the same way and Lesson 1 was assigned for homework reading. The new outlines in Lesson 2 of the textbook were presented on the tachistoscope by the master teacher in the control group on the third day and the class read from the transparencies prepared from the reading exercise in the text. The new outlines were presented in the same way by the master teacher in the control group, and the reading was supervised by the instructional assistant. The homework assignment was to practice reading Lesson 2 from the text. The fourth day, Lesson 3 was presented in exactly the same manner; and Lesson 4 was presented on the fifth day.

On the sixth day, the students were introduced to the writing of shorthand outlines. A tape was prepared by the master teacher, which introduced the writing of each word in Lesson 1 and then allowed time for the master teacher in the control group and the instructional assistant in the experimental group to write the word on a transparency while the students observed. The person supervising the class listened to the material on the monitor. Words and letters were then dictated and the students wrote them. A transcript of the entire tape was placed with the lesson plan for that day. The students were instructed to read and write Lesson 1 for homework. The seventh day, the same procedure was followed for Lesson 2; the eighth day, Lesson 3; and the ninth day, Lesson 4.

Why proceed so slowly in beginning shorthand? The experience of the master teacher indicated that if the students master the very fundamental theory of shorthand (this does not mean the memorization of rules, but understanding the directions of the strokes and instant recognition of the outlines), very little difficulty is encountered in the study of shorthand provided the student practices each day's assignment.

Dictation was introduced on the tenth day using material from the textbook. New material correlated with the textbook was dictated in class after Lesson 16.

A typical control class from the tenth class through the fifty-third class would be as follows: The master teacher presented the new shorthand theory on the Tachistoscope. The students would spell and read the outlines as they were flashed at the lowest speed. On repeat readings, the speed was increased. The preview words taken from the material to be dictated was then flashed and the students read. The transparency containing the preview words was then placed on the overhead projector and the tapes started. The tape first presented the preview words every 10 seconds and the students wrote. The material was then dictated at the base rate--each of the four channels at a different base. The students selected the channel which provided sound at their speed. After the letter had been dictated once, silent time was allowed on the tape for the students to ask to have outlines written on the chalkboard. The tapes were prepared so that the silent time for each tape was at the same place on the log sheet. This was accomplished by dictating words and phrases at the end of a letter on the faster tapes. In some classes time was also allowed for the reading back of the students' notes.

While the students were writing, the instructor moved around the room to observe writing techniques and to assist where necessary. The instructor wore a monitor around the neck which could also be tuned to any channel while observing.

The same procedure was followed in the experimental class with the master teacher presenting the new shorthand theory and conducting the reading back portion of the class when the lesson plan called for the students to punctuate and spell. The instructional assistant conducted all other segments of the class.

In addition to these duties, the instructional assistant was responsible for checking papers in preparation for grading by the professional staff and the performing of routine clerical duties related to maintaining the necessary files of lesson plans, tapes, instructional media materials, student progress charts, and other records and reports.

The final theory lesson was presented on the 54th day, and from that point on, the master teacher conducted only the reading back from notes when the lesson plan called for punctuation and spelling in the experimental group. Occasionally, the master teacher would enter the class just to observe.

The traditional measure of student achievement in shorthand has been the transcription with at least 95 percent accuracy of five-minutes of new material dictated at a given speed. This standard measure was adopted for the study. All tests were prerecorded on tapes by the master teacher who supervised during the control class and the instructional assistant supervised the entire test period in the experimental group.

Tapes were prepared for writing the homework assignment beginning with the 12th class. The students were permitted to enter either of the two rooms if a channel was not being used, remove the homework tape from the cabinet, place it on the console, start the machine, move to a listening station, and write the lesson. The homework tapes for the first semester did not contain preview and postview time.

Of the sixteen students in the control group, four withdrew from school during the first semester for personal reasons, one withdrew from shorthand because of failure and one was omitted from the study group because she was enrolled in the preteaching curriculum. Therefore, the control group and the experimental group statistics were computed on matched groups of 10.

A copy of the lesson plans for the sixth and nineteenth class periods are found in Appendix A.

B. Shorthand II

Pre-registration for the secretarial students was supervised by the investigator so that students would remain in the same groups for the second semester. The number of students remaining for the control and experimental groups limited the study to eight subjects for each section, as there was additional attrition for personal reasons.

During this semester, team teaching was introduced to permit more time for the master teacher to prepare class materials. The investigator supervised Monday, Wednesday, Friday mornings and Tuesday, Thursday afternoons. The second instructor supervised Tuesday, Thursday mornings and Monday, Wednesday, Friday afternoons. This procedure was followed for the remainder of the pilot program, and all test papers were graded by both faculty members.

The emphasis in Shorthand II was based mostly upon vocabulary and speed building, vocabulary meaning shorthand vocabulary. Most of the dictation for practice was previewed. Preview words were all placed on Tachistoscope slides and transparencies. Upon entering a typical class in Shorthand II, roll would be taken and then the preview words flashed on the screen at a very slow speed and gradually increased to the fastest flash on the meter, however, each day's lesson plan was varied so that students did not find preview would always be the first item or that Monday was transcription; Tuesday, write all period, etc. A detailed lesson plan showed how many minutes were to be allotted to preview. The transparency was then placed on the projector and the tape started.

The tape dictated the preview words every six seconds, and the students could look at the screen to check any outline of which they were not sure. The material for speed practice was first dictated at a base speed and then time would be on the tape for checking of words, then the letter was repeated 10 words faster. Time was again allowed for checking words, then dictated 10 words faster and back again at the base rate. Some letters were dictated and then silent time would be left on the tape for the students to read back. This time was recorded on the lesson plan. A copy of a lesson plan for Shorthand II is given in Appendix B.

In the control group, the master teacher was in the classroom at all times, and so she conducted the reading back of the dictation. At this time the students would punctuate and check the longhand spelling of words. For the experimental group, the instructional aide would record the time at which the master teacher was to enter the classroom on a chart located in the office, and the master teacher would then go into the room to conduct the reading where punctuation and spelling was to be involved. All other segments of the experimental class were supervised by the instructional assistant.

The students were also introduced to speed transcription during this semester and some transcription pointers were given. These were all outlined in the lesson plans and the transcription pointers were presented by the master teacher.

A chart was maintained of the transcription rates for the students in Shorthand II. Five minute tests at specific speeds were dictated every other

Thursday throughout the semester, which permitted each student eight opportunities to transcribe five minutes of new-material dictation with 95 percent accuracy. A chart was maintained of the tests that the students transcirbed and the highest rate achieved was used to compare the two groups. The t-test was used to test the results.

C. Shorthand III

During the spring and summer of 1967, the students were preregistered for the fall courses; and the returning students maintained their original assignment to the control and experimental groups. Several students selected medical shorthand, thereby reducing the control and experimental group to five subjects each.

Speed dictation was emphasized in the third semester of shorthand; however, considerable time was devoted to building transcription of mailable copy.

Classes met five days a week for 50 minutes. Throughout the semester, drills were given on punctuation and spelling; and the results of these quizzes were used to compare the two groups.

Four times throughout the semester, the students were given a series of three letters at a set speed. These letters were to be transcribed for mailability. The results of these tests were maintained on a chart, and the points earned were used as one basis for comparing the two groups. Records were also maintained of the students' transcription rate, and this information was used as another basis for comparison. The control class was taught entirely by the instructor using the tape, the tachistoscope slides, and transparencies. The experimental group was conducted by the instructional assistant with the exception of those segments of the class dealing with punctuation and transcription pointers. A sample lesson plan may be found in Appendix C.

During the summer of 1967, four tapes were prepared for each homework assignment in the text. Each tape was at a different base speed and included speed building and silent time for preview and postview.

D. Dictation and Transcription

Five students remained in each group during the fourth semester. The major emphasis was on transcription, and the class met three days a week for two consecutive periods. The five-minute take with 95 percent accuracy in transcription was all but eliminated from the program during this semester, and the basis for comparing the two groups was the total points earned by the students on mailable transcripts. The point system used was as follows: five points if the letter was absolutely perfect in every way; four points for a letter that contained one error that did not change the meaning of the letter; three points if there were two changes from the dictation without changing the thought; two points if there were three changes in the dictation; and one point if there were four changes in the dictation. No points were given for letters that contained very poor erasures, misspelled words, or changes which altered the thought of the material dictated. Total points earned on mailable letters for this semester were then used as a means of comparing the two groups.

The dictation included short, medium, and long letters dictated at set speeds, as well as office style dictation. A typical class might be as follows:

1. Speed dictation for 20 minutes.
2. Dictation for transcription, 30 minutes.

3. Transcription, 40 minutes.

4. Review of transcripts and discussion of corrections, 10 minutes.

During the semester, an attempt was made to conduct the class in such a way as to simulate office dictation. This was accomplished by dividing the class into two groups. Each group worked for a different company; and two tapes were prepared for each company, providing two speed levels. The tapes for each company were synchronized so that each student had received a copy of the incoming letter from her partner when she recorded and transcribed the reply. A copy of such a lesson plan is given in Appendix D. Transparencies and tachistoscope slides were also utilized.

Part II

Experimental Design for Testing Problem II

Two matched groups were used for the study. The students were tested throughout the two-year program on net speed on straight copy typing, production words per minute, understanding of spacing and problem solving, and mailable projects. Charts were maintained for each of these tests and an attempt was made to determine if there was a significant difference between the two groups at the end of each semester. The average of the results of a series of tests at the end of each semester was used as the basis for comparing the two groups.

A student assigned to the control group in the first semester of the freshman year was assigned to that group throughout the two years; the same was true of the experimental group. The t-test was used to test the difference between means.

Selection of Subjects

The two groups were selected from the total secretarial and general clerical students admitted to the Harrisburg Area Community College in the fall of 1966. Students are admitted to these programs on the basis of ACT test scores, high school record, and in some cases a personal interview.

The high school transcript of each entering student was reviewed to identify those students who had enrolled in typewriting in high school. The final examination for Typewriting I was administered to all such persons. Those successfully completing this examination were eliminated from the study group and placed in Typewriting II. The remainder of the entering class was divided into two groups on the basis of the ACT composite scores. Therefore, of 49 students entering the two programs, plus 4 students who elected typewriting, 25 were enrolled in the control group and 24 in the experimental group. The mean composite score of the control group was 17.2 and the experimental group was 16.2.

Selection of Equipment

The beginning typewriting classroom was equipped with 28 manual typewriters when the College opened in 1964. The number was increased to 32 on the new campus. In 1965, the advanced classroom was equipped with 24 electric typewriters. These machines were utilized for the study.

Selection of Materials

The materials used in the first two semesters of typewriting were taken from College Typewriting by Lessenberry, Wanous, and Duncan. In the third semester, the material from this text was supplemented by material dictated into a central recording system by the faculty and administration. In the fourth semester, material was used from the central recording system and Executive Typewriting by Reigel and Perkins.

All materials were prepared at least one semester in advance, classroom tested, and revised where necessary before becoming a part of the study.

Selection of the Instructional Assistant

The instructional assistant was a graduate of the general clerical program at the Harrisburg Area Community College and had completed two years of typewriting instruction. She was selected on the basis of personality, work habits, previous office experience, and eagerness to learn which had been demonstrated as a student. She remained with the College throughout the two-year study.

Experimental Program

The experimental typewriting class was scheduled at the same hour as the experimental shorthand class.

All class instructions were provided on prerecorded magnetic tapes. Each tape contained a full class period, and silent periods were allowed on the tape for timing specific projects or for practice periods, whichever the case may be. No live teacher instructions were given in the classes. Demonstrations and illustrations were prepared on transparencies and were utilized to enhance the learning process. When the new keys were presented, faster tapes were used for students who had some typing in the secondary schools.

The control group was supervised and assisted by the master teacher while an instructional assistant provided constant supervision to give attention to proper techniques in the experimental group. The master teacher visited the classroom frequently to insure the smooth operation of the learning process and to provide remedial teaching when necessary. Both the master teacher and instructional assistant wore the monitor and moved about the class throughout the entire period to observe and assist where necessary.

A complete transcript of the tape was provided with each lesson plan. The transcript indicated where transparencies were to be placed on the overhead projector and where each new item was presented on the tape. The typewriting tapes were all dictated by the master teacher since they contained actual instruction. A sample of the lesson plan and transcript for each of the first three semesters of typewriting are found in Appendix E.

The control group was scheduled during the late morning so that the instructional assistant could sit in and observe the master teacher in the classroom. The experimental group was then scheduled in early afternoon at the same time as the experimental group in shorthand to determine whether or not one master teacher and several instructional assistants could handle more than one class at the same time.

During the first and second semesters, the textbook was followed exactly, lesson for lesson. The instructional assistant proofread all papers from both the control and experimental groups in preparation for grading by the master teacher and maintained student progress charts. The master teacher and the instructional assistant discussed classroom problems frequently. In addition, the master teacher and the instructional assistant discussed class procedure informally with students in both groups.

During the third semester, a simulated office was established in the new classroom laboratory building. A third instructional assistant was hired to supervise this portion of the classroom experience along with the master teacher. Each student worked in a simulated office for at least 20 hours during the semester. Here they transcribed belts from an IBM central recording system. The belts were dictated by faculty and administration on remote microphones situated in faculty and administrative offices throughout the building.

The addition of this experience made it necessary to select what was considered to be the most important lessons from the textbook for classroom work. The material was selected by the two professional members of the staff. A series of five examinations were administered at the end of the semester and the average of the straight copy rate and the production rate on these tests was used as the basis for comparison.

During the fourth semester, the control and experimental groups were handled in much the same manner as in Typewriting III, with the exception of the textbook used, and the fact that both sections were scheduled in the same room at the same time. They were at opposite ends of the room since no assistance was to be given. Each student was required to use reference material where necessary. The textbooks provided projects which were to be completed by the student without help from the instructor. Lecture throughout the semester totaled approximately one hour. Where this was necessary, it was provided on prerecorded tape. The total points earned on these projects and the straight copy timed writing rates were used as a basis for comparing the two groups.

At the end of the first semester there were 22 students in each group. With attrition each semester, the final groups consisted of seven subjects each.

Part III

Experimental Design for Testing Problem III

A survey was conducted each year to determine student attitude toward the experimental program. The results of this survey are reported; however, no statistical analysis was undertaken. A student evaluation of the master teacher prior to the commencement of the automated study and at the end of the study was conducted to determine whether there was a change in the relationship of the professional staff with the students. The Chi Square was employed to determine if there was a significant difference.

Selection of Subjects

The subjects involved in the evaluation in 1965 were those students present in a class scheduled at one particular hour on a given date. The data was compiled for all faculty employed by the College. The survey did not include all students of the master teacher.

In the final faculty evaluation in 1968, students in all of the skills classes were asked to complete the evaluation of the master teacher, as all skills classes were taught with automated instruction and instructional assistants except for the control class.

All students in the experimental and control groups were also requested to complete a survey on their opinion of automated instruction at the conclusion of each academic year.

Selection of Materials

The evaluation forms used for the faculty member were the same forms designed by the Faculty Personnel Policies Committee of the College for student evaluation of all faculty members. The two forms are not the same;

therefore, one segment of the forms, rate the teacher in his all round teaching ability, was selected. Copies of the two forms are shown in Appendix F.

In addition, a form was designed by the two faculty members in the secretarial classes to determine the students' attitude toward automated instruction as well as the guidance and assistance received from the instructional assistants. A copy of this form is provided in Appendix G.

Experimental Program

Student attitude is very important in the learning of shorthand. Leslie[17] points out that failure to learn shorthand may be caused by the students' lack of cooperation in the learning process. Therefore, it would seem that if the student does not approve of the method of instruction, learning could be deterred.

The instructional assistants and the master teacher informally sought the opinion of students as to the method of instruction as the study progressed; however, it was impossible to determine if the attitude was really generally favorable. The students should be permitted to express their opinions without individual identity; therefore, at the end of the first year, each student was requested to complete the survey form which did not require student identification. The survey was conducted during the final class period. Again, at the end of the second year, each student was asked to complete the same form.

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[17] Louis A. Leslie, Methods of Teaching Gregg Shorthand, Gregg Publishing Division, McGraw-Hill Book Company, Inc., New York, 1953, p. 287.

CHAPTER V

EXPERIMENTAL FINDINGS

Hypothesis I and Corollaries

There is a direct relationship between the learning of shorthand theory, transcription proficiency, and speed of dictation and the amount of professional assistance provided during the learning process as measured by the achievement tests administered to the students in four semesters of Gregg Diamond Jubilee Series shorthand. The t-test was employed to test the hypothesis.

Shorthand I

A 100-word theory test was administered to both groups after Lesson 48 of the textbook. The students wrote the outlines from dictation and then transcribed in longhand. Table 1 shows the mean score on this test for both groups.

Table 1

MEAN SCORE ON 100 WORD THEORY TEST

Group	Number	Mean Score
Control	10	89.9
Experimental	10	87.4

The difference failed to reach the $p < .10$ level of significance.

Six five-minute writings were dictated at various speeds during the last five weeks of the semester. Table 2 shows the results of these tests for each group.

Table 2

MEAN DICTATION SPEED FOR FIVE MINUTES FROM NEW MATERIAL WITH 95 PERCENT TRANSCRIPTION ACCURACY

Group	Number	Mean Score
Control	10	70
Experimental	10	68

The difference failed to reach the $p < .10$ level of significance.

Shorthand II

Eight tests were dictated for five minutes at 60, 70, 80, 90, and 100 words per minute during the semester. The final score on these tests transcribed with 95 percent accuracy was used to compare the two groups. The mean for each group is presented in Table 3.

Table 3

MEAN DICTATION SPEED FOR FIVE MINUTES FROM NEW MATERIAL WITH 95 PERCENT TRANSCRIPTION ACCURACY

Group	Number	Mean Score
Control	8	86.25
Experimental	8	88.75

The difference failed to reach the $p < .10$ level of significance.

Eighteen transcription timed writing tests were given throughout the semester. The students transcribed from dictation for 10 minutes. Four of these transcription tests were administered during the last week of the semester and were used as a basis for comparison of the two groups. The mean for each group is presented in Table 4.

Table 4

MEAN NET WORDS PER MINUTE TRANSCRIPTION RATE ON 10-MINUTE TIMED WRITINGS FROM DICTATED MATERIAL

Group	Number	Mean Score
Control	8	25.5
Experimental	8	26.9

The difference failed to reach the $p < .10$ level of significance.

Shorthand III

During this semester, eight tests were dictated for five minutes at speeds of 80, 90, 100, 110, and 120. The final test transcribed with 95 percent accuracy was used as a basis of comparison. The mean scores for each group is presented in Table 5.

Three medium-length letters, approximately 150 to 180 words, were dictated at 60, 80, and 100 words per minute five times during the semester. The students transcribed these letters for mailability. Table 6 shows the mean dictation speed achieved by each group on the letters for mailability.

Ten quizzes were administered during the first half of the third semester on punctuation and spelling. These quizzes each contained 10 sentences which were written in shorthand on transparencies. The subjects transcribed the sentences and inserted the proper punctuation and in three tests they simply transcribed shorthand outlines which were underscored on the transparency for spelling.

The scores on these quizzes were averaged and this average was used as a basis for comparison between groups. Table 7 shows the mean score for each group.

The net transcription speed was calculated on four transcripts spread out over the semester. These transcripts were from class dictation and the final speed was used as a basis for comparison. Table 8 shows the mean transcription speed on a 10-minute writing from shorthand notes.

Table 5

MEAN DICTATION SPEED FOR FIVE MINUTES FROM NEW MATERIAL WITH 95 PERCENT TRANSCRIPTION ACCURACY

Group	Number	Mean Score
Control	5	100
Experimental	5	104

Table 6

MEAN DICTATION SPEED FOR 1 1/2 to 2 MINUTES FROM NEW MATERIAL TRANSCRIBED FOR MAILABILITY

Group	Number	Mean Score
Control	5	84
Experimental	5	84

Table 7

MEAN SCORE ON PUNCTUATION AND SPELLING QUIZZES

Group	Number	Mean Score
Control	5	77.2
Experimental	5	83

Table 8

MEAN TRANSCRIPTION SPEED ON NEW MATERIAL DICTATED AT THE SUBJECT'S BASE SPEED

Group	Number	Mean Score
Control	5	30.2
Experimental	5	33.6

The difference failed to reach the $p < .10$ level of significance in the data presented in Tables 5, 6, 7, and 8.

Shorthand IV - Dictation and Transcription

The dictation and transcription class met for two consecutive periods. The first period emphasized speed building for approximately 25 minutes. During the remainder of the class, new material was dictated for transcription. The students were also given practice in transcribing from cold notes and office style dictation. The second class hour was devoted to the transcription of the new material. The letters and memoranda dictated were short, medium, and long--from 50 to 300 words--in length. Charts were maintained on the speed of the dictation and the total points earned in the transcription which was for mailability. The total points earned during the semester were used as the basis for comparison of the two groups. Table 9 shows the mean transcription points for each group.

Table 9

MEAN TRANSCRIPTION POINTS ON MAILABLE TRANSCRIPTS
FROM SPEED DICTATION, COLD NOTES AND OFFICE STYLE DICTATION

Group	Number	Mean Score
Control	5	89
Experimental	5	83

The difference failed to reach the $p < .10$ level of significance.

Hypothesis II and Corollaries

There is a direct relationship between the learning of typewriting spacing, straight copy words per minute, production rate, and mailable project achievement and the amount of professional assistance provided in the classroom as measured by teacher tests administered to the subjects during the four semesters of typewriting. The t-test was used to test the difference between means.

Typewriting I

Charts were maintained of the student progress in straight copy typewriting throughout the semester on one-minute, three-minute, and five-minute writings. Charts were also maintained on production rates on letters, memoranda, business forms, manuscripts, and other business problem typing on which the students were expected to proofread and correct all errors. The net word per minute straight-copy and production rates were used.

One timed writing and one production test were given on each of the last five days of the semester. The average of the straight copy and production rates were used as a comparison between the two groups. The mean for each group on the straight copy rate is shown in Table 10 and the mean for each group on the production rate is shown in Table 11. Table 12 shows the mean score for each group on an objective test administered as a part of the final examination.

Table 10

MEAN NET WORD PER MINUTE RATE ON FIVE MINUTES OF TYPING ON STRAIGHT COPY MATERIAL

Group	Number	Mean Score
Control	22	39.6
Experimental	22	40

Table 11

MEAN NET WORDS PER MINUTE ON PRODUCTION MATERIAL

Group	Number	Mean Score
Control	22	38.2
Experimental	22	29.95

Table 12

MEAN SCORES ON OBJECTIVE TEST IN TYPEWRITING I

Group	Number	Mean Score
Control	22	44.9
Experimental	22	43.2

The difference failed to reach the $p < .10$ level of significance on all three measures shown in Tables 10, 11, and 12.

Typewriting II

A chart was maintained for each student's progress of net word per minute rate on straight copy typing throughout the semester as well as a chart on the subject's production rate. At the end of the semester one five-minute straight copy timed writing and one production test were given in each of the last five class periods. The average score for these five tests were used as a basis of comparing the two groups. Table 13 shows the mean typing rate on five-minute writings and Table 14 shows the mean production rate on the five tests.

Table 13

MEAN NET WORDS PER MINUTE ON FIVE MINUTE STRAIGHT COPY TYPEWRITING

Group	Number	Mean Score
Control	15	46.5
Experimental	15	46.7

Table 14

MEAN NET WORDS PER MINUTE ON PRODUCTION TYPEWRITING

Group	Number	Mean Score
Control	15	34.1
Experimental	15	36.8

The difference failed to reach the $p < .10$ level of significance on both measures.

Typewriting III

Five tests on production and straight copy typing for five minutes were administered to the class at the end of the semester. Table 15 shows the mean score for the five-minute straight copy writings and Table 16 shows the mean production rate.

Table 15

MEAN NET WORDS PER MINUTE ON FIVE-MINUTE STRAIGHT COPY WRITINGS

Group	Number	Mean Score
Control	9	55.8
Experimental	9	52.9

2 OF 2

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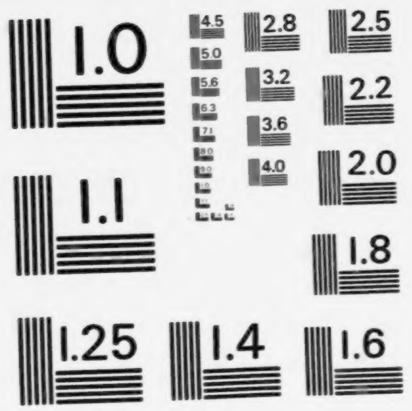
1.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Table 16

MEAN PRODUCTION RATE FOR MAILABLE COPY

Group	Number	Mean Score
Control	9	18.7
Experimental	9	16.2

The difference for both measures failed to meet the $p < .10$ level of significance.

Typewriting IV

During this semester both groups were scheduled for class at the same hour because of the nature of the course. The subjects were completely responsible for using reference material and following through with each assigned task. Timed writings were given throughout the semester and the average of the last two writings was used as a basis for comparison. Table 17 shows the mean net words per minute rate for each group on five minute straight copy writings.

A test was administered at the end of each of the three projects and the scores on each test were averaged as a second basis of comparison. Table 18 shows the mean score for each group on the project tests.

Table 17

MEAN NET WORDS PER MINUTE ON FIVE-MINUTE STRAIGHT COPY WRITING

Group	Number	Mean Score
Control	7	55.29
Experimental	7	64

Table 18

MEAN SCORES ON THREE TYPEWRITING PROJECTS

Group	Number	Mean Score
Control	7	77.86
Experimental	7	79.57

The difference on the net words per minute on straight copy writing showed a sifnificant difference at the .10 level with the experimental group showing a higher mean score.

The difference on the projects failed to reach the $p < .10$ level of significance.

Hypothesis III and Corollaries

Evaluation of Master Teacher

The third area of concern in this study is to attempt to determine if there is a significant difference in the student evaluation of the professional teacher at the end of two years of study as compared with an evaluation of the same teacher utilizing the traditional methods of instruction. A Chi Square was used to compare the two evaluations. Table 19 shows the Chi Square.

Table 19

STUDENT EVALUATION OF MASTER TEACHER

	1965	1968	Total
Above Average	19	127	146
Average	4	12	16
Below Average	0	0	0
Not Applicable	0	3	3
Totals	23	142	165

The Chi Square failed to reach the $p < .05$ level of significance.

Student Attitudes

The survey form found in Appendix G was used in the spring of each year. The results of the final survey are shown below.

SUMMARY OF STUDENT ATTITUDE SURVEY

Shorthand IV - Dictation and Transcription

1. Do you like or dislike taped instruction?

Like 100%	Dislike 0%

2. Do you feel that the taped instruction was advantageous?

Yes 50%	No 5.3%

3. Do you feel that you would have learned more if the instructor had been in the classroom? (Do you feel you would have learned as much if the instructional assistant were in the classroom?)

Yes 50%	No 50%

4. Were the explanations on the tape clear?

Yes 100%	No 0%

5. Were the illustrations beneficial?

Yes 94.7%	No 5.3%

6. Please place the numbers 1, 2, and 3 before the following to indicate your order of preference of instruction.

	First Choice	Second Choice	Third Choice
Instructor without tapes	0	30%	70%
Instructor with tapes	50%	50%	0
Instructional assistant with tapes	50%	50%	0

Typewriting IV

1. Do you like or dislike taped instruction?

Like 95.45% Dislike 4.55%

2. Do you feel that the taped instruction was advantageous?

Yes 90% No 10%

3. Do you feel that you would have learned more if the instructor had been in the classroom? (Do you feel that you would have learned as much if the instructional assistant had been in the classroom?)

Yes 10% No 90%

4. Were the explanations on the tape clear?

Yes 86.35% No 15.65%

5. Were the illustrations beneficial?

Yes 95.45% No 4.55%

6. Please place the numbers 1, 2, and 3 before the following to indicate your preference of instruction.

	First Choice	Second Choice	Third Choice
Instructor without tapes	10%	0	90%
Instructor with tapes	18%	72%	10%
Instructional assistant with tapes	72%	28%	0

CHAPTER VI

ANALYSIS AND INTERPRETATION OF RESULTS

The data presented fails to support the hypothesis that there is a significant difference between the performance of shorthand students taught with taped instruction and dictation and professional personnel and those taught in the same manner utilizing instructional assistants.

As other studies have found taped dictation used in conjunction with multiple-channel installations to be effective instructional media, the study would appear to hold implications for the professional staff and traditional teaching. Perhaps the professional teacher's time should be spent in more creative work such as preparing material for the classroom, planning methods and procedures to be followed, and coordinating the work of assistants, rather than supervising skill techniques and proofreading papers which may very well be done just as effectively by instructional assistants.

The primary concern of the professional staff should be student benefit and improvement; therefore, it would seem logical to make the best use of instructional media available today and provide means for the professional staff to develop materials which could enrich the present programs and provide more meaningful experiences for the students. Certainly, the results do not indicate that professional staff is not necessary in the teaching of secretarial and clerical skills, but does imply that perhaps professional teachers have been channeling their energies into minor areas of endeavor rather than into the challenging area of improving materials and methods.

The data presented in typewriting also fails to support the hypothesis that there is a direct relationship between the learning of typewriting spacing, straight copy words per minute, production rate, and mailable project achievement and the amount of professional assistance provided in the classroom.

In one instance on the net words per minute on the five-minute straight copy writing in the fourth semester, a significant difference was found at the .10 level of significance in that the experimental group with the instructional assistant performed better. Perhaps this difference could be accounted for in the relationship of the instructional assistant to the students. Perhaps the student is more relaxed with the instructional assistant since the grading on achievement is the responsibility of the professional staff.

The data presented indicates that the students still maintain an identity with the professional staff. The professional staff was of the opinion that they were able to devote more time to individual students throughout the project. The data would tend to support this theory in that there is no significant difference in the evaluation of the master teacher.

Since the data does not support the hypothesis that professional assistance in the classroom is significantly better than semiprofessional assistance, it would seem possible to conclude that the skills courses in the secretarial program can be taught at a lower credit hour cost than under the traditional method of instruction or taped instruction involving all professional staff. See Appendix H for a complete analysis of the cost of the program as compared to the cost of traditional instruction for a period of five years.

With this method of instruction it is possible to offer specialty courses in medical, legal, and technical shorthand and typewriting even though the classes are small. Several classes in typewriting or shorthand could even be scheduled for the same room at one time.

Recommendations

It is suggested that further similar studies be completed to follow up and validate the conclusions of this study. It is further recommended that other means of presenting preview words in shorthand be investigated such as tachistoscopic equipment using film strips.

In view of the favorable response of students to automated instruction, further research should be undertaken in the use of video tape and single concept loop films in the teaching of typewriting, filing, office machines, and office procedures.

As a result of this study and the time gained for work with individual students, the investigator was able to establish a simulated office shown on page 28. Work performance of the students and the informal research conducted through observation of the students at work made the investigator aware of the need for research to answer a number of questions.

1. How much actual classroom instruction in shorthand and typewriting is necessary to prepare students for office occupations?
2. What percent of traditional classroom instruction in shorthand, especially transcription, and typewriting transfers to the job situation?
3. Does more learning and understanding really take place in a simulated office as compared with the traditional classroom? If so, at what point should it be introduced in the curriculum?

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APPENDICES

Course No. 111   Class No. 6   Lesson No. 1

Class Tape No. 111.6

Slide No. None

Transparency No. 111.42
111.43

Homework Assignment:
Write the words in Lesson 1 and read the sentences from the textbook.

Source of Class Dictation GREGG SHORTHAND FOR COLLEGES, Vol. I, Diamond Jubilee Series

Class Supplies:

Pens for Transparencies	x
Lined Transparencies	x
Stop Watch	
Letterheads or Forms	
Five-minute sheets	
Interval Timer	
Textbook	x
Transcript	

Objectives:

To introduce the proper techniques for writing the shorthand outlines in Lesson 1 of the textbook.

To increase the students' reading rate.

APPENDIX A

Secretarial Science 111.6
Dialogue

Shorthand I. Today we begin writing shorthand. Will you please take out your shorthand pad, open the cover on it, and place it in front of you. (Pause)

Do not fold the cover under, but allow it to remain free on the desk. (Pause)

You notice here on the transparency that your notebook page is divided in half by a line down the middle. What we want to do is to write across in this fashion.

(Illustrate on transparency as instructions are given.)

Over to the line and back to the next line. We come all the way down the left column; when we finish the last line,we come up and down the column on the right side. (Pause)

(Pick up notebook and illustrate as the following instructions are given.)

When you have completed the entire page, you turn this page over and write on the clean page following. Do not write on the back of the page. This would involve turning your notebook, and we don't want to do this. It takes too much time. After we have completed the notebook the whole way through this way, we will simply turn it over and come back through the other way so that both sides of the paper will be used. For your homework you may write on both sides of the paper. However, it would be better to keep a separate notebook for the homework and to use a different notebook for classwork. As you work down the page of your notebook, your left hand should be holding the page on which you are writing and the left hand should be used to keep the paper moving up. Your right hand does not move down on the page, but rather your left hand moves the page up so that your right hand remains in much the same writing position. You should have a rubber band to hold back all of the pages that have been used in your notebook so that when you walk in all you have to do is open the notebook and your notebook opens at the first clean page. (Pause)

Now, for writing Lesson 1. The first shorthand character we want to write is the shorthand "s." In which direction is the shorthand "s" written? (Pause)

(Write an "s" on transparency)

That is right, it is written down in this way. Your first "s" is the comma "s." If you will notice, it has a small curve to it. It comes in a downward direction. We are not going to write rapidly at first. Take your pen and write a line of "s's." Ready. Writing down just like a comma, the bottom of that "s" will be on the line. s-s-s-s-s-s-s. The next letter is the "f." In which direction is your "f" written? (Pause)

That is correct. It is written down.

(Write "f" on transparency)

Your "f" takes up about 2/3 of the space between the lines. Watch as I write the "f." Now you write several--f-f-f-f-f-f-f-, now the s-f-s-f-s-f.

Our third shorthand letter is the "v." In which direction is the "v" written? (Pause)

That is correct.

(Write the "v" on the transparency)

Down. So we write the "v." Now this takes up about a full line space.

(Write on the transparency)

So, we have had "s," "f," and "v." Write a line of "v's". v-v-v-v-v. And now s-v-f-v-s-v-f-s-v. We will now write the "a." This is a large circle. Watch as I write it. (Pause)

(Write several "a's" on transparency)

You write. a-a-a-a-a-s-f-v-a-s-f-v. We will now write the word "say." Watch as I write. We write the "s" first and then the "a"; we start just a little further above the line than we would if we were going to have just the "s" on the line. We write "s," and swing around clockwise to write the circle. Write a line of "say." s-a, say, s-a, say, s-a, say, s-a, say, s-a, say. Our next word is "ace."

You write the "a" first and then the "s." Watch. We start far enough above the line so that we can write the entire word. a-s, ace. You will notice that I start above the line and I am writing clockwise with my circle vowel and back down to the line with the "s." You write the word--ace, ace, ace, ace, say, ace, say, ace, say, ace.

We have written the "s," "f," "v," and "a;" and now we want to use them in words. The first word is "safe."

(Watch as I write)

We start far enough above the line so that we have the "s-a" and, if possible, the bottom of the "f" resting on the line. s-a-f, safe. Write a line of the word "safe." s-a-f, safe, s-a-f, safe, s-a-f, safe, s-a-f, safe. Go ahead, spell the word to yourself as you work. (Pause)

The next word is "face."

(Observe as I write)

Here we are going to cut the line with the "a" and down below the line, the "s." Keep your "s" short. f-a-s, face. Write a line of the word "face." f-a-s, face, f-a-s, face. (Pause)

The next word is "vase."

(Observe, please)

The "v" requires a full line space so begin under the line above, come to the line with the "v," swing around clockwise with the "a" and down with the "s." We have v-a-s, vase. Write a line of the word "vase." Spell it to yourself as you write. v-a-s, vase, v-a-s, vase. (Pause)

The word "save." Since our "v" normally takes a full line of writing, we are going to extend the "v" slightly below the line.

(Observe as I write)

Start up high, write s-a, and swing down with "v." Again, s-a-v, save. Write a line of save. s-a-v, save. (Pause)

The word safes.

(Watch, please)

We start up high enough so that the "f" will end on the line. The last "s" will extend below the line. We also have a joining between the "f" and "s." s-a-f-s, safes. Write a line of the word "safes."

We will now write some of these words together. Write each word once. Ready--say, s-a, say; safe, s-a-f, safe; ace, a-s, ace; vase, v-a-s, vase; save, s-a-v, save; face, f-a-s, face.

Now, a new letter. The "e" is a circle vowel and as you will see on the screen, when we write the circle vowel by itself, we move from left to right or counterclockwise. The "e" is very, very small. You should exaggerate the writing of "e" and "a" for the time being.

(Write "e" and "a" as instructions are given.)

Write very small "e's" and very large "a's" so that when you begin writing rapidly, there will be no mistaking when you have written an "a" and when you have written an "e." Let us try a row of "e" and "a." Ready--ea ea ea ea.

Now, for the word "see." We won't start as high as we did in say because the circle will be smaller. Observe--s-e, see, s-e, see. You write it. s-e, see, s-e, see. Write the word "say." s-a, say; see, s-e, see; say, see; say, see, say.

"Sees" is our next word. If you will observe, we are going to end the second "s" on the line. We begin far enough above the line so that the second "s" will end on the line. s-e-s, sees. Write the word--s-e-s, sees, s-e-s, sees; see, s-e; say, s-a; sees, s-e-s.

The word "fee."

(Observe, please.)

The only difference between see and fee is the length of the first letter. The "f" is 2/3 of a space long--f-e, fee. Write--fee, fee, fee, see, see, see, fee, see, fee, say.

Now, the word "fees." Observe--f-e-s, fees. Write a full line of the word fees, f-e-s, fees.

"Ease." Watch the screen please. Again you are going clockwise. You are closing the "e" as you write the "s," and the "s" rests on the line. e-s, ease. Write it; ease, e-s, ease; e-s, ease, e-s, ease. Continue with a line of ease.

Easy.

(Observe as I write the word)

When we finish that "s" in ease, we simply curve around with another circle vowel and we have the word easy. Write it--e-s-e, easy, e-s-e, easy.

Continue writing a full line of "easy." Let us add the letter "n" to our shorthand alphabet.

(Observe as I write.)

The "n" is a short, straight stroke written from left to right. Write a line of the n,n,n,n; and, of course, its sister letter is the "m" which is twice as long and moves from left to right. Observe as I write the m,m, and the n,n,m,n.

We have already written the word "see," but let us write it again. s-e, see. If you do not remember how to write it, look at the screen. (Pause)

Now we are going to write seen.

(Observe--seen)

You will write "see," but instead of stopping with the "e," continue right on with the "n." Again, s-e-n, seen. Notice that I am using the line to keep the "n" straight. I come down below the line as I make the "s", I swing back up to the line with the "e" and over with the "n." Write a line of the word seen, s-e-n, seen; s-e-n, seen; s-e-n, seen.

(Observe, please)

We have written the word say. Now, I want to write "sane"--"s" and "a" below the line, come back to the line and over with the "n." s-a-n, sane. Write, please--sane.

(Watch the screen as I write the word vain.)

The only difference between sane and vain is the length of the "v." v-a-n, vain. Write it. vain, vain, vain, vain, vain.

The word knee. Observe--write along the line with "n," down below and up to the line with the "e." Knee, write it. knee, knee, knee, knee, knee.

Observe the word me. Simply write the "m," which is the long stroke on the line, down below the line with your circle, close the circle by coming back up to the "m." Keep these circles just that--circles. Don't loop them. Write--me, me, me, me, me, me.

The word mean. If you will watch, we simply go along the line with the "m," around with the circle vowel, and over with the "n." mean, m-e-n, mean, mean, mean, mean, mean, mean.

And now the word may. Observe, here we have a large circle. Write along the line with the "m" and down around to make a large circle--may. Write--may, may, may, may.

The word main. If you will watch, along the line with "m," down with the "a," and back up to the line and across with the "n." Write it. Main, main, main, main, main.

Name. Start with the "n," down with the "a," and over with the "m." Name, name, name, name, name, name.

Aim. If you will observe, the "a" is written first. Start on the line, come right below the line with the circle in a clockwise motion, back to the line, and along the line with the "m." Aim. Write it. Aim, aim, aim, aim, aim.

We have written see, we have written seen, and now we will write seem. The only difference is the length of the last stroke, and we are writing "m". s-e-m. Write it. s-e-m, s-e-m.

Now we want to write same. The only difference between seem and same is the size of the vowel. Remember to keep the "a's" large and the "e's" small. We are going to exaggerate this "a." If you will watch as I write s-a-m, same. Keep your "s" short so that you don't mistake it for an "f." And write, same, same, same, same, same, same.

The word fame. The only difference is that we have an "f" at the beginning--f-a-m, fame. Write it. Fame, fame, fame, fame, fame.

Write the following words as they are dictated: seem, fame, same, seem, fame, same, same, seem, fame.

And now the one that seems to confuse us the most for some reason or another. We are going to write the "t" and "d." If you will observe, "t" is always written up and "d" is always written up. The "t" is the short stroke; the "d" the long stroke. And so let us write a line of "t" and "d." td, td, td, td.

The word eat. We make the "e" first, writing clockwise. As we come up to close the "e," we go straight up with the "t." Actually, the "t" is what closes the "e." Again--e-t, eat. You write it. e-t, eat, eat, eat, eat, eat.

The word tea. We are now writing the "t" first and "e" is then at the end of the stroke. Start on the line, up with the "t," and clockwise with the "e." Write. tea, tea, tea, tea, tea.

Our next word is neat. The "n" goes across the line, come below the line for your "e," and straight up for the "t." Neat. You write neat. Neat, neat, neat.

The next word is meat. We come across the line with the "m," below with "e," and up with the "t." Remember class, write small circles small and large circles large. m-e-t, meat. Write it. Meat, meat, meat, meat, meat.

The next word seat. If you will watch, "s" continue below the line, up with the "e," close it, and straight through with the "t." Write it. Seat, seat, seat, seat, seat.

Feet. Your "f" down to the line and right on around with your "e," close it at the line, and up with the "t." Feet, f-e-t, feet. Write it. Feet, feet, feet, feet, feet.

Stay. If you will observe, begin your "s" slightly above the line so the bottom of it ends on the line. Then, you have a sharp joining as you change directions to write the "t," and the "a" is written clockwise at the end of the "t." Observe as I write again. "s" to the line, straight up with the "t," and around with the "a." Stay. Write it. s-t-a, stay, s-t-a, stay, stay, stay.

Our next word team. The "t" is written up so the "e" must be at the top. Observe as I write. Up from the line with the "t," around counterclockwise with the "e," cross over the "t," and straight off with your "m." Watch it again. t-e-m, team. Write it. Team, team, team, team, team.

Steam. If you will watch, down to the line with your "s," up with your "t," around with your "e," and cross over the "t" with your "m." Steam. Write it. Steam, steam, steam, steam.

Feed. If you will watch, down to the line with your "f," and continue right on down with your "e," close them at the line, and up with your "d." Watch again. Down with your "f," come below the line, circle clockwise, cross over the line, and back up to the "d." Write it. Feed, feed, feed, feed.

Our next word, saved. You have written save today in this way--s-a-v. At the end of the "v," change directions and up with your "d." Write--saved, s-a-v-d, saved, saved. Don't forget to keep the large circle large. s-a-v-d, saved.

Stayed. Down to the line with the comma "s," up with the "t," circle clockwise with the "a," back to that "t," and straight up with the "d." You noticed you traced over a part of the "t" as you completed the "a" and moved up with the "d." Again, s-t-a-d, stayed. Write it. Stayed, stayed, stayed.

Believe it or not, you have written every word in Lesson 1 at least once. Now, we will try the punctuation marks. The period slants to the right. Begin above the line and write a line slanting down to meet the line of writing. Again--period. Write it. Period, period, period, period, period, period, period.

The question mark is simply an "x." That is simple--we all know how to make question marks or "x's",don't we? Question, question, question, question, question, period, question, period, question, period, question.

Paragraph. Observe please. Write down to the line with the period (Your shorthand period, of course.), then swing back with another line slanted to the left. It looks like an arrowhead. Write, please. Paragraph, paragraph, period, question, period, paragraph, question, period, question, paragraph.

The dash is made up of two "d's" with the second "d" written close. Dash, dash. Write it. Dash, dash, dash. Our left parenthesis is written as the normal left parenthesis with a "t" written through the middle of it. Left parenthesis. Write it. Left parenthesis, left parenthesis.

Right parenthesis is a regular right parenthesis with a "t" through the middle of it. So, it is right parenthesis, right parenthesis, left parenthesis, left parenthesis. Capitalization marks are made by placing two little short straight strokes close together. The hyphen is also two short, straight strokes written close together--hyphen. Write hyphen, hyphen, hyphen.

Write the punctuation marks as they are dictated--period, question, paragraph, parentheses, dash, hyphen, capitalization.

One more new word--Dave. Please observe. The "d" written up, the "a" at the end in a counterclockwise direction, and swing into the "v." Watch it again now. d-a-v, Dave, with capitalization marks under it. Write it-- d-a-v, Dave; d-a-v, Dave.

I am going to dictate words to you. Before you write each word, please look at the screen and they will be written for you. You will then write them in your notebook. Ready? Meat, meat, seat, seat, feet, feet, seem, seem, sane, sane, vain, vain, tea, tea, fame, fame, ease, ease, safe, safe, mean, mean, save, save, sees, sees. Now let us write the alphabet. a, e, s, n, f, t, m, v, d.

For homework, of course, you are going to write each word in Lesson 1 as many times as you feel necessary. You will turn your homework assignment in at the beginning of the next class. When you are writing your homework tonight, do not write the sentences. However, practice reading these sentences.

Course No. 111

Class No. 19

Lesson No. 19

Class Tape No. 111.19 TA
111.19 TB
111.191
111.192

Homework Tape No. 111.141H
111.142H

Slide No. 55
56
57
111.191
111.192

Homework Assignment:
Read and write the words and letters in Lesson 14. Write from tapes.

Transparency No. 111.191

Source of Class Dictation Graded Drills in Gregg Shorthand, Simplified
A. E. Klein

Class Supplies:

Pens for Transparencies	
Lined Transparencies	
Stop Watch	
Letterheads or Forms	
Five-minute sheets	
Interval Timer	
Textbook	x
Transcript	

Objectives:

To determine the students' achievement in learning shorthand vocabulary.

To present new shorthand vocabulary.

To begin to build speed in writing shorthand outlines from dictation.

APPENDIX A

Secretarial Science 111.19
Lesson Plan

5 min. 1. Start test tapes 111.19 T-A or 111.19 T-B
(All instructions on the tape).
Have the students put their papers aside to be transcribed at the end of the class period.

15 min. 2. Present the words in Lesson #14 on the Tachistoscope.
(Instructor)

2 min. 3. Present the writing of t, d, ded, and det on the chalkboard.
(Instructor)

TAPES 111.191 and 111.192

7 min. 4. Preview words for letters 25 and 26 of Klein on the Tachistoscope.
(Instructor)

START TAPES

4 min. *5. Preview words dictated every 10 seconds.

4 min. 6. Letter 25 - two tapes - base on one at 30, other 40.

2 min. Check words.

3 min. Dictated 10 words faster.

4 min. Letter 25 at base rate.

(To instructor - stop tapes at this point if time does not permit further dictation.)

3 min. 7. Letter 26 at base of 30 and 40.

2 min. Check words.

2 min. Letter 26 dictated 10 words faster.

3 min. Letter 26 at base.

5 min. 8. Students transcribe word test and turn in papers.

*If necessary to spend time on the reading of Lessons 13 and 14, omit the dictation tapes.

Secretarial Science 111.19

Vocabulary Preview

1. finished
2. analysis
3. finances
4. nurses
5. Moses
6. criticism
7. occurring
8. it will be
9. fault
10. services
11. necessity
12. offsetting
13. relieved
14. to fly
15. surprise
16. sister
17. Akron
18. birthday
19. speed
20. clothes
21. afraid

Secretarial Science 111.19
Test

Section A

1. Dear Sir
2. children
3. relieve
4. you would be able
5. July
6. first
7. all
8. my
9. of the
10. Mrs.
11. finally
12. vacation
13. office
14. hotel
15. this is the
16. asking
17. I have had18.
18. going
19. $6,000
20. was
21. there, their
22. more
23. check
24. entire
25. called

Section B

1. tired
2. kind
3. action
4. events
5. mostly
6. which
7. good
8. and
9. when
10. to be able
11. yours truly
12. will be able
13. 4,000
14. three o'clock
15. brought
16. small
17. sold
18. places
19. national
20. could
21. to see
22. send
23. 8%
24. put
25. this is the

Course No. 112 Class No. 8 Lesson No. 8

Class Tape No. 112.81
112.82
112.83
112.84

Homework Tape No. 112.81H
112.82H
112.83H
112.84H

Slide No. 112.81
112.82
112.83

Homework Assignment:
Lesson 8 (Textbook)

Transparency No. 112.81

Source of Class Dictation REFRESHER COURSE IN GREGG SHORTHAND, Simplified, p. 107

Class Supplies:

Pens for Transparencies ____
Lined Transparencies ____
Stop Watch ____
Letterheads or Forms ____
Five-minute sheets ____
Interval Timer ____
Textbook ____
Transcript ____

Objectives:

To review brief forms.

To build speed in writing shorthand.

To build the shorthand vocabulary.

APPENDIX B

Secretarial Science 112.8
Lesson Plan

1. (Chalkboard before class). Set up to transcribe a letter.
    a. 70-space line.
    b. Double spacing.
    c. 5-space indention for paragraphs.
    d. Do not erase errors.

10 min. 2. Flash the Brief Forms and Preview Words on the screen with the flash meter set at 25.

4 min. a. Dictate Brief Forms and Preview Words every six seconds.

6 min. 3. Dictate Letter 1 at the base rates - 60, 70, 80, and 90 words a minute.

7 min. 4. Have the students read, punctuate, and check the writing of difficult words. (Instructor)

10 min. 5. Dictate Letter 1 in three parts for speed building; each part dictated at 10 and 20 words faster than the base rates.

6 min. 6. Redictate Letter 1 at the base rates.

5 min. 7. Have the students transcribe from their shorthand homework notes, Letter 52.
    a. Transcribing time is on the tapes.
    b. Have the students transcribe this letter from the tape (homework) dictation.
    c. Letter 52, Lesson 7 from the textbook.

Secretarial Science 112.8
Brief Forms

1. probable
2. question
3. responsible
4. situation
5. such
6. them
7. under
8. year, were
9. with
10. you, your

Preview Words

1. valued
2. stockholders
3. developments
4. universal
5. marvelous
6. distributes
7. warn
8. automatically
9. customers
10. choose
11. courteous
12. expand
13. acquired
14. coverage
15. expansion
16. distance
17. damaged
18. minimum
19. wise
20. always
21. concerned
22. tomorrow

Course No. 211 Class No. 24 Lesson No. 24

Class Tape No. 211.241
211.242
211.243
211.244

Homework Tape No. 211.241H
211.242H
211.243H
211.244H

Slide No. 211.241
211.242

Homework Assignment:
Lesson 24 (Textbook)

Transparency No. 211.241

Source of Class Dictation GREGG SPEED BUILDING FOR COLLEGES, Simplified, Second Edition, Gregg, Blanchard, Baldwin (text) p. 142, Student's transcript, pp. 32-34.

Class Supplies:

Pens for Transparencies	
Lined Transparencies	
Stop Watch	
Letterheads or Forms	
Five-minute sheets	
Interval Timer	x
Textbook	
Transcript	x

Objectives:

To review shorthand theory.

To provide progressive speed dictation beginning at each student's base rate.

To provide dictation at each student's base rate to be transcribed as mailable copy.

APPENDIX C

Secretarial Science 211.24
Lesson Plan

10 min. 1. Flash the preview words on the screen.
    a. Repeat at random increasing the rate of the flash meter.

2 min. 2. START THE TAPES. Dictate the preview words every six seconds.

3 min. 3. Dictate Half-Minute Progressive Speed Builder.

1 min. 4. Check words.

3 min. 5. Redictate Half-Minute Progressive Speed Builder.

1 min. 6. Dictate Letter 171 at the base rates - 90, 100, 110, and 120.

1 min. 7. Check words.

3 min. 8. Dictate Letter 171 twenty and forty words faster than the base rates.
    a. Redictate Letter 171 at base rates - 90, 100, 110, and 120.

1 min. 9. Dictate Letter 172 at the base rates - 90, 100, 110, and 120.

1 min. 10. Check words.

3 min. 11. Dictate Letter 172 twenty and forty words faster than the base rates.
    a. Redictate Letter 172 at the base rates.

2 min. 12. Dictate Letter 220 at the base rates - 90, 100, 110, and 120.

1 min. 13. Check words.

4 min. 14. Dictate Letter 220 twenty and forty words faster than the base rates.
    a. Redictate Letter 220 at the base rates.

5 min. 15. NEW MATTER - Dictated at the base rates - 90, 100, 110, and 120.
    a. Material should be taken in new matter notebook.
    b. Transcribe as mailable copy.

10 min. 16. Have the students transcribe the new matter material as mailable copy.

Secretarial Science 211.24
Preview Words

information

method

customers

district

at that time

matter

interesting

efficient

you may not have

exception

of course

Tulsa

debtors

settlement

very important

invoices

there have been

awaiting

briefest

Denver

that the

carelessness

Course No. 212 Class No. 37 Lesson No. 37

Class Tape No. 212.371D - 212.371T
212.372D - 212.372T
212.373D - 212.373T
212.374D - 212.374T

Homework Tape No. 212.601 - 212.611
212.602 - 212.612
212.603 - 212.613
212.604 - 212.614

Slide No. 212.371
212.372
212.373

Homework Assignment:
Study 23, Part III, Letters 145-151
Study 23, Part IV.

Transparency No. 212.371
212.372

Source of Class Dictation SHORTHAND DICTATION STUDIES, Bowman, Oliverio, Third Edition, pp. 334-337 (text) pp. 321-323 (text) p. 76 (Manual)

Class Supplies

Pens for Transparencies			
Lined Transparencies			
Stop Watch		No.	
Letterheads or Forms	x	Specify	Anderson Scout Axe Company
Five-minute sheets			Clinton Handle Company
Interval Timer			
Textbook	x		
Transcript			

Objectives:

To provide progressive speed dictation beginning at each student's base rate.

To provide RUSH material dictated at 80 and 100 words a minute to be transcribed as mailable copy.

Course No. 212 Class No. 37 Lesson No. 37

Approx. Time	Procedure:
Dictation Class	
8 min.	Flash the preview words for Part II of Study 23 on the screen. Repeat at random increasing the rate of the flash meter.
3 min.	START THE TAPES. Dictate the preview words for Part II of Study 23 every six seconds.
3 min.	Dictate Part II of Study 23, "Investing in Insurance" at the base rates.
8 min.	Read, punctuate, and check words. (Instructor)
3 min.	Dictate "Investing in Insurance" ten words faster than the base rates.
3 min.	Redictate "Investing in Insurance" at the base rates.
3 min.	Dictate the preview words for Part III of Study 23 (Letter 144) every six seconds.
3 min.	Dictate Letter 144 at the base rates - 100, 110, 120, 130.
1 min.	Check words.
3 min.	Dictate Letter 144 ten words faster than the base rates.
2 min.	Dictate Letter 144 twenty words faster than the base rates.
3 min.	Redictate Letter 144 at the base rates.
Transcription Class	
6 min.	START TAPES. Tapes 1 and 2 begin transcribing from 212.36.
5 min.	Tapes 3 and 4. "Miss Secretary, take a telegram to be filed as a night letter." Dictate 132 at 80 and 100 words a minute. Transcribe as RUSH item. (Pass out Master Copies to students on tapes 1 and 2)
2 min.	Check telegram (132). "Miss Secretary, take a fast telegram and a letter." Dictate 133 and 134 at 80 and 100. (Tapes 1 and 2)
10 min.	Tapes 1 and 2 transcribe 133 and 134. (Give Master Copies to students on tapes 3 and 4)
12 min.	Tapes 3 and 4 continue transcribing from 212.36.

Course No. 212 Class No. 37 Lesson No. 37

Approx. Time	Procedure:
6½ min.	Tapes 1 and 2 continue transcribing from 212.36.
1 min.	Tapes 3 and 4 check the telegram (133) and the letter (134).
5 min.	Tapes 3 and 4. "Miss Secretary, take a telegram as a reply." Dictate 135 at 80 and 100.
	(Distribute Master Copies to students on tapes 1 and 2.)
½ min.	Tapes 1 and 2 check telegram (135).
5 min.	Tapes 1 and 2. "Miss Secretary, take a reply to go as a fast telegram." Dictate 136 at 80 and 100.
6 min.	Tapes 3 and 4 continue transcribing from 212.36.
	(Distribute Master Copies to students on tapes 3 and 4.)
10 min.	Tapes 1 and 2 continue transcribing from 212.36.
½ min.	Tapes 3 and 4 check telegram (136).
1 min.	Tapes 3 and 4. "Take a letter to go out right away." (Dictate 137 at 80 and 100.)
8 min.	Tapes 3 and 4 transcribe 137. (Do not tell the students when to begin transcribing, start watch as soon as the dictation is finished.)
1 min.	Tapes 1 and 2 check letter 137.

SECRETARIAL SCIENCE 101.1 Typewriting I

Instructor's Supplies

Tape No. 101.1

Transparencies 1, 2, 3, 4, 5, 6, 7, 8, and 9

Duplicated Materials Copies of drills to be typed in class.

Other Folder, typing paper

Class Announcements Procedure for preparing for the day's work.

Homework Assignment

Objectives

1. To introduce the students to the proper procedures and techniques necessary to learn to typewrite.
2. To teach "touch typing" of the home row keys and the "h" and "e."

Class Procedure

(X) Drill ( ) Production ( ) Test ( ) Timed Writings

3-5 min. Check class roster, distribute typing paper, pass out forms to be completed.

5 min. Explain the listening stations and how to operate them.

41 min. START TAPE--Use monitor and follow dialogue of the tape attached to the lesson plan.

APPENDIX E

Secretarial Science 101.1
Dialogue

Log

0 Remove your books from the top of the desk, place your bookholder to the right of the typewriter, open your book to page 1. Be certain that you have the book in good reading position. (Pause)

If you will observe the screen, we will identify the typewriters in this classroom. There are four different machines--first, we have the
Olympia, (TRANSPARENCY #1)
Royal, (TRANSPARENCY #2)
Underwood and Smith Corona, (TRANSPARENCY #3)
Will you please check your machine to determine which of the four it is. (Pause)

Now that you know the make of the typewriter you are using, it is necessary to identify some of the operative parts before beginning to type. If you will look at the screen, you will notice that this
(Technician point to carriage on transparency #4)
part of your typewriter is called the carriage. The carriage moves across as you type. This part on the back of the round cylinder on the carriage is the paper table. On the paper table on the left side, we have what is called a paper guide. You see it here on the projection, now find it on your own typewriter. (Pause)

Those of you who have Royals, Smith Coronas or Olympias should have the left edge of the paper guide on "0" on the paper guide scale. If it is not already there, move the left edge of the paper guide so that it points to 0 on the scale. Those of you who have Underwood typewriters, move the left edge of the paper guide to 10. (Pause)

Now when you insert the paper, the left edge of the paper will be up against the paper guide, and the left edge of the paper should come in on the scale on 0.

If you will observe the screen again, this round rubber roller is called the cylinder or platen. Your paper rolls around the cylinder, and it is here against the cylinder that the keys strike the paper. Resting on the cylinder, you will find what we call the paper bail. This paper bail holds the paper against the cylinder. It can be pulled forward or raised up out of the way. It is pulled forward in order to insert the paper or later on to make erasures. Find these parts on your typewriter. (Pause)

Looking at the screen, you see here on the left a little knob with a scale going from 1 to 3. This is called the line finder. When you have the knob set on 1, you are set for single spacing; if it is set on 2, for double spacing, and 3 is for triple spacing. Find this on your own typewriter, and be sure that it is on 1 for single spacing. (Pause)

On the screen on the right side, you have the paper release. When pulled forward, the paper can be removed easily. On the left and on the right of your carriage, are the cylinder knobs. These are used to roll the paper ahead by hand. Also, between the carriage and these rollers, are the carriage release levers. They are found on either side of the carriage and by pressing down on either one of these, you can move the carriage either to the left or to the right. Please locate on your typewriter the paper release. (Pause)
(Technician point to each part as they locate on their machines)
cylinder knobs, (Pause) and carriage release levers. (Pause)

Are there any questions? (Pause)

The next procedure is to insert the paper.

(INSERT TRANSPARENCY #5)

You have been given two sheets of paper. Pick these up and hold them in your left hand as seen on the screen. With the right hand, pull forward on the paper bail so that it is away from the cylinder. Place the paper between the platen and the paper table with the left edge against the paper guide. With your right hand on the cylinder knob, the first finger and the middle finger on top of the knob, the thumb underneath, give a good twist of the wrist and your paper should come up around the platen. Insert the paper now. (Pause)

As soon as it is in position where the paper bail rollers can grip it, push back on the paper bail. Your paper is now in position for typing. Are there any questions?

(TRANSPARENCY #6)

If you will look at the screen, to remove the paper from the typewriter, pull forward on the paper release and the paper bail. This can be done by using the middle finger of the right hand on one and the index finger for the other. Pull forward on both of them at the same time. Now, remove the paper from your machine using the left hand to grasp the paper. Simply pull it out of the machine. You may now remove the paper. (Pause)

You will now reinsert the paper as the instructions are given. Hold it above the machine and push the paper release back in position, place the paper down between the paper table and the cylinder. Your paper bail is still out. With your right hand twist the cylinder knob so that your paper goes into the machine. Push the paper bail back into position and you are ready to type. (Pause)

(SHOW TRANSPARENCY #7)

Correct posture at the typewriter is very important. On the screen, you see an illustration of good posture. Your chair should be positioned so that your

Log

elbows are relaxed in a natural position, one foot is slightly ahead of the other, and the fingers are curved over the keys with the wrists slightly bent. If your typewriter is too high or too low, it is possible to adjust your chair and the typewriter. The typewriter adjustment is under the desk and in the back. Please make the necessary adjustments now. If you have difficulty, please ask for help. (two minutes)

You may need to make additional adjustments later. First, we will study the hand position on the typewriter. If you will drop your hands to your side, in a natural position and allow your arms to hang there, you will notice that your fingers are curved in toward the palm. This is natural. It is nothing you think about. It is just natural when you drop your hands to have these fingers curve in.

(TRANSPARENCY #8)

Look at the screen and you will see that our home keys for the right hand are--little finger on ";" the ring finger on the "l," the middle finger on "k," and the first finger on "j." The left hand--the little finger is on "a," the ring finger on "s," the middle finger on "d," and the first finger on "f." Now bring your hands up to the home keys in the same curved position, as they are at your side. Remember that the very tips of the fingers are resting on the keys themselves. That means that if some of you have long fingernails, you are going to have to file them by tomorrow. Your fingernails may not be any longer than the tip of your finger so that you stroke the keys with the tips of the fingers. The thumb of the right hand operates the space bar. Now, as you have your hands on the typewriter, your wrists should be slightly bent. Your chair should be close enough to the typewriter so that your elbows are at your side. If your elbows are back too far, then your chair is too close. Adjust your chair if necessary. (Pause 1/2 minute).

Check your typewriter to be sure that the front edge of the typewriter is even with the front edge of the desk. (Pause 15 seconds).

(Hand out duplicated sheets for students without books).
Turn to page 2 of your book. Take your position at the typewriter, hands on the home keys, elbows in line with the body and tucked in, feet flat on the floor, one foot may be slightly ahead of the other so that you can shift the position of your feet without shifting your body, and sit straight in the chair. You want to stroke the keys as though they are hot. You do not want to hold onto them; you strike and release the key and it will print and return to the key basket. Let's try with the first finger of each hand--f with the left hand, j with the right hand. Keep your eyes on the drill in the book. Ready--f j f j f j f j f j. Now, turn to page 3 of your book. Hands back on the keyboard on the keys, and we will try going through the home keys with the left hand beginning with the index finger--ready--f d s a. Now, the same thing with the right hand j k l ;. Left hand--f d s a. Right hand--j k l ; f d s a j k l ; Our carriage has been moving and we want to return it to start a new line.

(TRANSPARENCY #9)

Please look at the screen. With your right hand on the home keys bring your left hand up to the carriage return, at the time you first hit the carriage return, it moves the paper ahead one line so with your left hand take hold of the carriage return lever, throw it, actually throw it, so that it will fly across itself if you hit it hard enough. You will throw the carriage and while the carriage is traveling across itself, you will bring your left hand back to the home keys. This operation is supposed to be performed without looking up from your book. You have that? Then throw the carriage. (Pause)

Now look down toward the bottom of the page, you have some drills with the home keys. Remember, your eyes will remain on the book while you type. And also remember this time we are going to space after every two letters. The space bar is struck with the thumb of the right hand, the same action as you have on the keyboard--simply strike it and release it. Are you ready? ff jj ff kj dd kk dd kk ss ll ss ll aa ;; aa ;; Left hand up to the carriage return, throw it, hand back on the home keys and we are ready to type. ff jj ff jj dd kk ss ll ss ll aa ;; aa ;; Now that we have typed the line twice, we want to leave an extra space between this line of typing and the next. In order to get the extra space there, we are going to hit our carriage return twice. Just hit your carriage return enough to move the paper forward one line. When you hit it the second time, throw it. Hand back on the home keys and you are ready to type. (Pause)

You are now going to type the second line. You will space after every two letters. The space will not be called; time will be allowed for you to space. So, eyes on the book. ff jj fj fj dd kk dk dk ss ll sl sl aa ;; a; a; return carriage. Same line. Double return carriage.

23 You will practice these same three lines for several minutes at your own speed. Remember to keep your eyes on the book. Your eyes remain on the book while you throw the carriage. Begin typing.

25 We are going to learn several new keys and here is the procedure to follow throughout the remainder of the course when we are learning new keys. First, of all, find the new key on the projection in the front of the room, then locate the new key on your typewriter keyboard, study the stroking for the key, watch your finger make the reach to the new key and move back to home position.

(TRANSPARENCY #8)

On the projection, you see our new key for today is the "h." The "h" is located to the left of the first finger of the right hand on the home row of keys.

(Technician demonstrate the following on transparency).

The first finger of the right hand is going to move over from the "j," stroke the "h," and then move back immediately over the "j." Together now, reach over to the "h" key with that index finger, move it back to the "j" key. You see the finger move across. Together we will type the tryout practice, in 1C on page 4. (Pause)

Ready? hh hj has had had has had, return carriage. If you were stroking that "h" key properly, the other three fingers were not removed from the home keys. They stayed right over the "k," "l," and ";". And now for the "e."

(Technician demonstrate on Transparency #8)

Log

If you will look at the projection, you will notice that your "e" is directly above the "d." The "d" is struck with the middle finger of the left hand. The same finger goes up to the third row of keys, strikes the "e" and returns to the home key. The other three fingers stay on the home keys. Only the middle finger goes up. Ready for the tryout practice? dd ed ed ee eel feel feel, return carriage.

Now you are ready to practice the material at the bottom of page 1D; but, before you do, take a look at the illustration in 1D for stroking the keys. You notice the proper method is for the tip of the finger to strike the key, then the tip of the finger comes up as the key releases itself. Curve the fingers. Remember you are spacing with the right thumb. Keep the carriage moving steadily and return the carriage quickly without looking. Eyes always on the book. Ready?

29 1D is typed as dictated.

41 Stop typing. Remove the paper from the machine. Move your carriage to center and then cover your machine. You may remove your earphones and turn off your listening stations.

SECRETARIAL SCIENCE 102.2 Typewriting II

Instructor's Supplies

Tape No. 102.2, Lesson 77

Transparencies 102.21

Duplicated Materials

Other Folder, typing paper

Class Announcements

Homework Assignment

Objectives

1. To review basic typewriting techniques.
2. To review the typing of a memorandum, announcement, postal card, and memorandum from rough draft.
3. To build production rate.

Class Procedure

( ) Drill (X) Production ( ) Test ( ) Timed Writings

3-5 min. Check class roster.
Students complete Preparatory Practice before class begins.
38 min. START TAPE--Use monitor and follow the dialogue attached to the lesson plan.
4 min. Allow four minutes for the students to complete the calculation of gpwpm.

Secretarial Science 102.2
Lesson Plan

Log

Dialogue

0 Insert two full sheets of paper into your machine. Set for a 70-space line and single spacing. Take the correct typing position. (Pause)
(TRANSPARENCY #102.21)

1 Will you please look at the projection in the front of the room. Will all of you together, as each proofreader's mark is pointed out, tell us what it means and the correction that is to be made in this particular item. You will begin now. (2 minutes).

4 77C Production Inventory. We have a memorandum to type, an announcement and a postal card. We will go through the instructions together. Problem #1 is a rough draft of a memorandum. You are going to use a half sheet of paper, set your margin for a 60-space line, leave a one-inch top margin, use the current date, allow four blank lines between the date and the subject, and, of course, block the paragraphs. You will single space but be sure to double between paragraphs. Problem #2 on page 137 is an announcement to be typed. You are to center the problem both vertically and horizontally on a half sheet of paper, using double spacing. Problem #3 is a postal card. You will center problem #2 on a postal card. The card is to be addressed to you. If you have difficulty in determining center on the postal card, be sure to ask. Problem #4 is a memorandum. This is to be the same memorandum you typed in Problem #1. The only difference is that you will type on a full sheet of paper. Type the date one inch from the top of the page, leave four blank lines between the date and the subject line, and leave four blank lines between the subject and the body of the memorandum. You will double space the memorandum itself; therefore, you must indent for paragraphs. Do not erase on these problems. You will have 30 minutes of typing time. Gather your supplies and wait until the signal is given to begin typing. (2 minutes).

8 Begin working on 77C (30 minutes).

38 Stop typing. Total the words at the end of each problem that you completed and divide by 30. This will give you your gross production words per minute. Record this on the first page. Then staple and turn in the papers. You may remove your earphones and turn off your station.

Secretarial Science 201.2 Typewriting III

Instructor's Supplies

Tape No. 201.2, Lesson 152

Transparencies 201.21, 201.22, 201.23, and 201.24

Duplicated Materials

Other Folder, typing paper

Class Announcements

Homework Assignment

Objectives

1. Review of basic typewriting techniques
2. Emphasis--accuracy and neatness
3. Production Typing: Letter Styles

Class Procedure

( ) Drill (X) Production ( ) Test ( ) Timed Writings

3-5 min.	Check class roster
42 min.	START TAPE--Use monitor and follow the dialogue attached to the lesson plan.
5 min.	Compute npwpm.

Secretarial Science 201.2
Lesson Plan

Log

Dialogue

0 Page 262, 152B. We want to practice typing on ruled lines, typing outside margins, and tabulations. First, type a 4-inch horizontal line with the underscore even with the left margin; then remove the paper, reinsert it and center the heading on the line. In the next little exercise you want to begin typing 5-spaces outside the left margin. In order to do this, depress the margin release key and at the same time depress the backspace key. When you have typed the line, you will find that your left margin automatically locks where you had it originally set. In the third exercise you want to type the word list as a single spaced, three-column tabulation. In planning the tabulation, use the backspace for centering and allow 5 spaces between columns. You will have six minutes to complete this exercise.

1 Begin typing.

(TRANSPARENCY #201.21)

6 Stop typing. 152C. Type Problem #1 as a modified block letter with indented paragraphs and mixed punctuation. On the screen, you see that modified block style with block paragraphs and modified block with indented paragraphs differ only in that you indent 5 spaces for the paragraphs. You are going to use mixed punctuation which means you are going to have a colon after the salutation and a comma after the complimentary close. In addition there is a postscript. In an actual office situation, a postscript is given to you after you have typed the letter. Therefore, all end of letter notations such as identification initials, enclosuros and carbon copy notations have already been typed on the letter. The postscript is the very last item on the letter. Simply double space after the last end-of-letter notation and type the postscript. In this case, of course, indent 5 spaces for the first line.

(TRANSPARENCY #201.22)

8½ Type the letter a second time in the AMS simplified style. AMS simplified style is shown to you in this second illustration. You will notice that everything begins even with the left margin as in block style; however, eliminate the salutation. Triple space after the last line of the inside address and type a subject line. Do not type the word subject. Type this in all caps even with the left margin. Then, triple space and type the body of the letter. The paragraphs are blocked. The complimentary close is eliminated also. Type the writer's name and title in all caps four line spaces below the last line of the body. You will notice that the name and title begin even with the left margin, and that the title is typed on the same line with his name. Use a space, hyphen, space to separate the name from the title, then double space and type your identification initials, enclosure, and so on.

(TRANSPARENCY #201.23)

Problem #2 is a letter to be typed on an executive-size letterhead and an interoffice memorandum. Even though you are typing a short letter, you are going to use a 5½ inch line of writing, modified block style with indented

Log

paragraphs. Indent 10 spaces for paragraphs. On the inside address in this letter, the address direction, northeast, is given. This is placed on the same line with the street address. Type the street address, comma, capital N, period, space, capital E, period, on the same line.

(TRANSPARENCY #201.24)

Repeat this letter as an interoffice memorandum, using a six-inch line of writing. On the illustration, you see that each item in the heading begins at the same point. Space down four lines from the heading of the interoffice memo and type the body. Always place the reference initials on a memorandum. Again, I urge you to proofread and correct all errors before removing the paper from the typewriter. Gather your supplies and wait for the signal to begin typing. (1 minute)

12 Begin. (30 minutes)

41½ Stop and compute the npwpm. Record the rate on the first page, place in your folder, and file the folders in alphabetical order. You may remove the earphone and turn off the listening station.

STUDENT EVALUATION OF FACULTY
(1965)

This is a questionnaire on faculty evaluation. We ask your honest appraisal. Do not identify yourself. Write the name of each of your professors in the blocks at the top of the chart and evaluate each professor with the following rating key.

Rating Key:

5-Superior; 4-Good; 3-Average; 2-Just passable; 1-Unsatisfactory

LIST FACULTY NAMES HERE

Presentation							
Fairness							
Availability							
Appearance							
Helpfulness							
Enthusiasm							
Punctuality							
Over-all Appraisal							
Mid-Semester Grade							

Student Rating Form for Teachers

Teacher's Name ______________________________ Course Number_________
Date______________________________ Course Title_________

Your Mid-Term Grade ________

To The Student:

The following form is to be filled in by you and is to be based upon your own judgment. Be as objective as possible so that your report will be fair and honest. Read each item carefully and understand it before attempting an evaluation of the teacher in terms of it.

If the teacher is excellent on the point, mark the space under "5."

If the item does not apply and the teacher deserves no merit, mark the space under "0."

Indicate your estimate of the teacher's relative strength in terms of the item on which you are grading him by marking the appropriate spaces. The judgments you express are to be based on your experience in this class. Please complete information for each item.

ITEMS:	Not Applicable 0	Poor 1	2	Average 3	4	Excellent 5
1. The teacher is familiar with the subject matter of the course and demonstrates thoroughness of scholarship.						
2. Teacher presents the subject matter clearly.						
3. The teacher makes the materials of the course interesting.						
4. The teacher uses instructional media material effectively.						
5. The feeling between the teacher and student is friendly and cordial.						
6. The teacher is enthusiastic.						
7. The teacher has his course organized for presentation and is prepared for his class.						
8. Assignments are clearly and definitely stated.						
9. The teacher maintains order and proper behavior in class.						
10. The examinations are fair and just.						

	0	1	2	3	4	5
11. Grading policies and practices are fair and just.						
12. The time in the classroom, studio or laboratory is well spent.						
13. The teacher informs the students in ample time, what is expected of them in the course and holds to these standards.						
14. The teacher gives the student personal help when they need it.						
15. The teacher is punctual.						
16. The teacher dresses in good taste, is well groomed and has a good appearance generally.						
17. The teacher abides by accepted ethical standards and does not discredit his fellow teacher or the college.						
18. You would recommend this teacher's course in terms of the value of its subject materials to your friends whose interests are similar to yours.						
19. The teacher manifests a real interest in the entire college program by willingness to cooperate (including student activities).						
20. Rate this teacher in his all-round teaching ability.						
21. The teacher challenges you to greater achievement.						

22. List any particular strength or weakness that was not covered in the above.

STUDENT ATTITUDE SURVEY

_____ 1. Do you like or dislike taped instruction?

_____ 2. Do you feel that the taped instruction was advantageous?
If yes, in what way?

If no, why?

If you list disadvantages, please indicate how they might be overcome.

_____ 3. Do you feel that you would have learned more if the instructor had been present in the class rather than the instructional assistant? (Do you feel you would have learned as much if an instructional assistant had been present in the class rather than the instructor?) If yes, indicate why?

_____ 4. Were the explanations on the tape clear?

_____ 5. Were the illustrations beneficial?

6. List any suggestions you may have for the addition or deletion of material on the shorthand tapes.

7. Please place the numbers 1, 2, and 3, before the following to indicate your order of preference of instruction.
___Instructor without tapes
___Instructor with tapes
___Instructional assistant with tapes

Appendix H

COST ANALYSIS FOR A PERIOD OF FIVE YEARS

Equipment

12	Stenorette tape machines, 56 listening stations, consoles, 2 monitors, and installation	$ 5,765	
2	Tachistoscopes, overhead projectors, and screens	1,550	
3,000	45-minute magnetic tapes, reel	9,540	
800	Tachistoscope slides	176	
12	Cans of fixative	36	
300	Transparencies	78	
69	Commercial transparencies	299	
			$ 10,129

Salaries Using Experimental Method of Instruction

Instructional Assistants and professional staff (Estimated)	126,500
Total cost of equipment and instruction (Estimated)	$136,629

Estimated Cost of Instruction Using Control Method of Instruction

Equipment	$ 10,129
Salaries for professional staff	157,400
Total Estimated Cost	$167,529

Estimated Cost Per Student Credit Hour--Experimental Method	$23.56
Estimated Cost Per Student Credit Hour--Control Method	$28.88